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**FROM THE
QUARTERLY JOURNAL
OF ECONOMICS**

AMOSKEAG MANUFACTURING COMPANY

MANCHESTER, N. H.



HON. T. JEFFERSON COOLIDGE

T
MANUFACTURING CO

OF

MANCHESTER, NEW HAMPSHIRE

A HISTORY

EDITED BY GEORGE WALDO BROWN

Printed and Bound in the Mills of the
MAG MANUFACTURING COMPANY
1915



THE AMOSKEAG
MANUFACTURING CO.

OF

MANCHESTER, NEW HAMPSHIRE

A HISTORY

COMPILED BY GEORGE WALDO BROWNE

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1915

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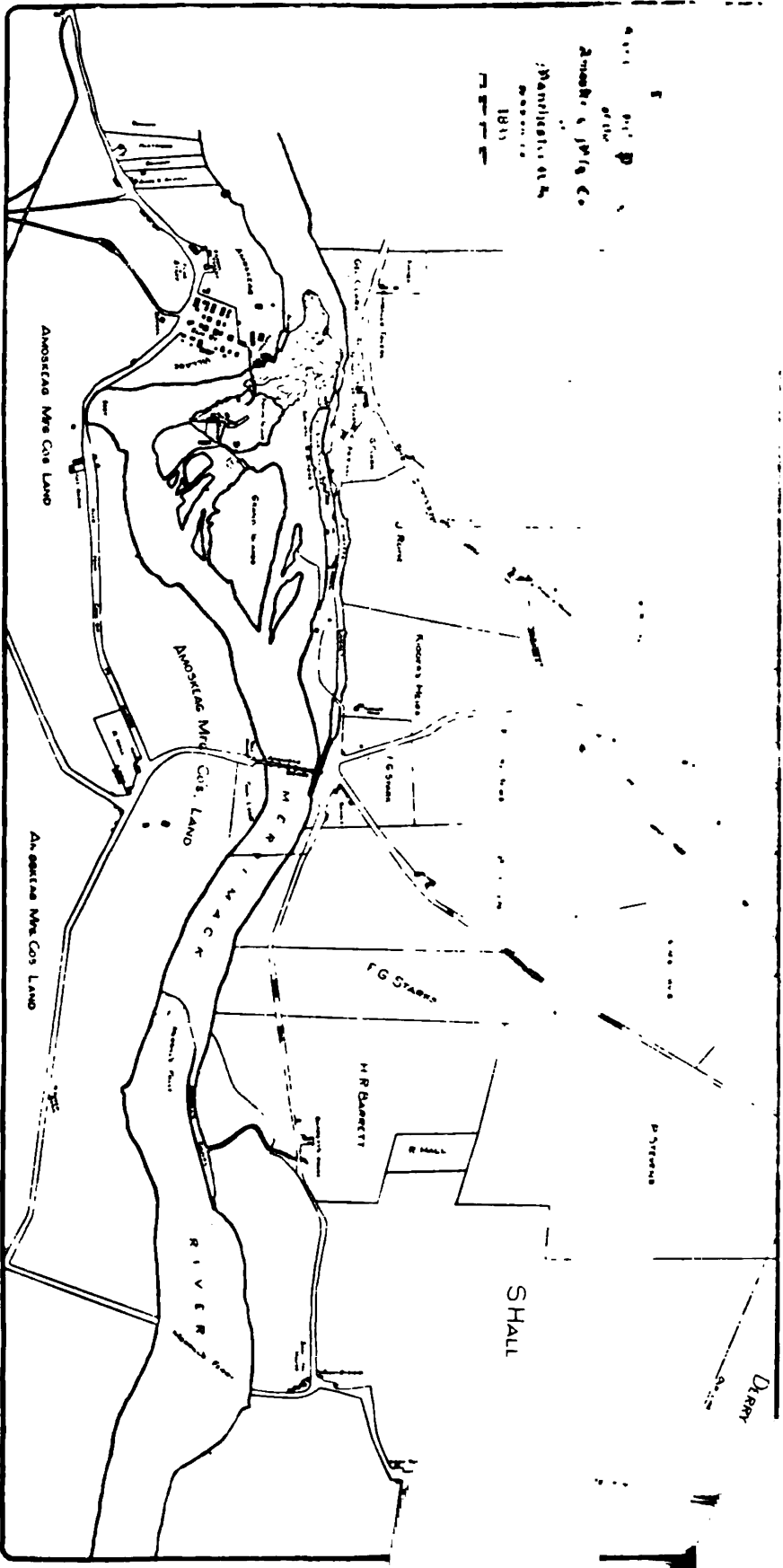
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INTRODUCTION

Complete and authentic history of the beginning of cloth manufacture in America is not really available to-day, but as accurate an account as may be obtained is given here of first manufacture by power in the Manchester of America, and it is certainly an honorable record. If it is true that the first cloth manufactured by power in this country was at the falls of Parker River, in 1794, the pioneer at Amoskeag, Mr. Benjamin Prichard, was only ten years behind those who undertook the work in the Massachusetts parish of Newburyport. While there were a few struggling mills before 1804, it was not until 1810 that the industry of cotton manufacturing in New England can be said to have really entered upon a successful period. In 1812 there were twenty cotton mills in Massachusetts, with 17,371 spindles; thirty-three in Rhode Island, with 30,663 spindles; New Hampshire had only three small mills. It required twenty years more to establish the industry upon what might be considered a firm footing.

From the small beginning of a little over a hundred years ago, or more strictly speaking the seventy-five years that have marked the actual growth of the Amoskeag Manufacturing Company, the textile business of America has expanded to wonderful proportions. It employs now more people than any other trade or calling. Including the manufacture of finished clothing, 1,400,000 wage-earners are enrolled in its

army of workers. Of these 378,880 are employed in the cotton mills.

It is creditable to our government and especially to those who have conducted our manufactures, that the average wages of the American cotton laborers is higher than in any other country in the world. This rate is steadily advancing, while the advantages to the textile workers is constantly increasing. No more are the days long or the duties exacting, for with each improvement of machinery comes a corresponding lessening of the exactness of toil. Labor in the cotton mills never stood on a higher plane, and it certainly always ranked well, not only with those who toiled, but with those who met them in other walks of life. May this truth never be gainsaid, and may the rewards of this great producing class steadily grow with the progress of intelligent industry

The thanks of the author of this book is due to the many who have so generously assisted him in his work. An author is, at best, little more than a compiler of facts gleaned from others, a little here by one, a little elsewhere by another, an addition here and an addition there, all united and assimilated in one fabric by him who is the weaver, the dull-gray ground relieved, it may be, by a touch of romance. Where so many names and dates occur as in a work of this kind it is inevitable that errors should be found. But in every case possible the statements and enumerations have been carefully verified by the original records; in others, what has been considered the most reliable authorities have been accepted. Not infrequently accounts given here differ from those of other writers, but in these cases the utmost care has been exercised to obtain the facts.

G. W. B.

CHAPTER I

THE PIONEER OF PROGRESS.

MANCHESTER and manufacturing seem synonymous terms. If the advance guard of a new industry had begun to establish itself at Amoskeag Falls previous to the year 1810, little had been accomplished to warrant the success of the great manufacturing company to follow and lay the foundation of the metropolis of the Merrimack valley. The township, which for over fifty years had borne the nondescript name of Derryfield, was noted simply as a good fishing resort and the place of "a hideous waterfall." Not a town meeting had passed without some action having been taken to protect its fisheries, but nothing had been done towards developing its water power.

The name of the river was an Indian term most fittingly applied to that section between Pennacook and Pawtucket Falls, for the red men, like the Chinese, considered each distinctive portion of a stream by its own particular designation aptly describing its natural feature, which was always their guide in christening a locality. Merrimack comes from *merru*, "swift;" *asquam*, "water;" *ack* or *auke*, "place:" that is "Swift water place," the middle word abbreviated to the sound of "m" in the pronunciation of the phrase by the English. This seems to have been a common practice, which many writers have erroneously explained by saying that a letter or sound had been thrown in for euphony's sake.

If the geologist is correct in believing that *Waumbek Methna*, the summit of the "Mountain of the Snowy Forehead," which we designate as Mount Washington, is the oldest point of land, why may it not be claimed that the Merrimack, which has its source in these mountains, is the oldest river in the world? Flowing for forty miles through massive gateways, overhung with granite walls hemming in a region wild and picturesque beyond description, leaping precipice after precipice, our river reached its next sublime phase at Amoskeag.

Amoskeag is another Indian term corrupted from *Namasket*, which was formed from *namos*, "fish;" *kee*, "high;" *et*, "place;" in its completeness signifying "high place for fish." This name had no reference to a waterfall, except that it was a great place for fish which had been checked in their upward passage of the river by the natural obstructions of the stream. *Kaskonshadi*, meaning literally "broken water," was also given to these rapids, and is the name that should have been retained, but which long since seems to have disappeared from its associations.

If old Namaske was long knocking with thunder tones at the door of manufacture and progress, the fishermen awoke slowly to the call. In fact, they never came to realize the importance of the energy of the river in lifting them from the hopeless task of tilling the sandbanks of "Old Harry's Town." It was left for outsiders to harness the legions of the "broken river" to the machinery of industry and transform the scene of blank desolation into one of lively interest and activity.

Foremost of the captains of industry, who were to open the way to the development of the natural resources and lay the foundation of Amoskeag's future greatness, was Samuel

Blodget, born in Woburn, Mass., April 1, 1724, the third son of Caleb and Sarah (Wyman) Blodget. His paternal ancestor, Thomas Blodget, came to New England from London in the ship "Increase," during the summer of 1635. His maternal grandmother was Esther Johnson, granddaughter of Capt. Edward Johnson, author of "Wonder-Working Providence of Sion's Saviour in New England," a noted and valuable work in its day. His mother was a sister of Ensign Seth Wyman, the hero of Lovewell's expedition against the Indians in the spring of 1725, so it will be seen he had a notable ancestry.

Though barely of age, Samuel served a creditable part in the Louisburg campaign of 1745, and upon his return he engaged in river traffic between Haverhill and Newburyport. He opened a stage line connecting Haverhill with Boston, and another line running to Concord, N. H. He began to deal in lumber extensively, entered into the fur trade and manufactured pearl and potash. He sent his furs to London, when the markets across the ocean were making demands upon the products of the great belts of forest reaching from the Province of Massachusetts to the valley of the St. Lawrence River. Believing he could improve his facilities for business by locating in the midst of a timber country, he purchased a farm of over three hundred acres, in 1751, on Black Brook, Goffstown, N. H., about two miles from Amoskeag Falls. This movement proved somewhat inopportune, as the breaking out of the French and Indian war soon after checked his operations. With his usual promptness to act he joined the army in the First New Hampshire regiment under Col. Joseph Blanchard, serving as sutler but meeting with stirring experiences before he had completed his services. At the close

of the war, while he did not abandon his mill on Black Brook, he opened a store in Boston, where he conducted an extensive business for several years. He was one of the prime movers in the settlement of the Eastern provinces and, with his two brothers-in-law, fitted out the little body of New Englanders who founded St. John, New Brunswick. For some years he had there a ready market for goods in his line, and he became largely instrumental in building up the new town.

His pearl and potash works had so far developed as to demand more of his attention, and he returned to his home on Black Brook, soon opening a store at Goffstown Centre, now known as Grasmere. He was made Assistant Deputy Surveyor of the Woods to King George by Governor Wentworth, and he was especially active in maintaining peace between the royal officials and the colonists for the large district he covered. He was also made Judge of Probate in Hillsborough County. Too old to take an active part in the War for American Independence, and deeply engrossed in his various industries, he was yet ever ready to contribute of his means and to encourage others to carry on the struggle to a successful termination. Three of his sons saw active service, and one lost his life in the cause. Leaving his store at Goffstown in charge of his son William at the close of the war he went back to Haverhill, to enter with his accustomed enthusiasm into another branch of enterprise, which at that period was awakening all of New England. This was the manufacture of linen, duck and sail cloth. The first had been fostered largely by the Scottish immigrants. As early as the arrival of those people in 1718, whose reputation as skillful spinners had preceded them, the women of Boston became

enthusiastic over the matter, and there was a general demand for the opening of spinning schools. A writer in describing the situation says:

Directly "the spinning craze," as it was aptly called, took possession of the town, and the women, young and old, high and low, rich and poor, flocked into the spinning school, which for want of better quarters, was set up on the Common, in the open air. Here the whirl of their wheels was heard from morning to night. Prizes were offered for the best work, and the enthusiasts went about, proudly, clothed in the homespun products of their own hands.

With all these enterprises on his hands, any one of which would have exacted the entire attention of an ordinary person, he found time to spend a year abroad, during which he witnessed the awakening of interest in the manufacture of cotton goods in Great Britain. Everywhere the people were aroused and expectant. The patent for the spinning machine awarded to Lewis Paul, in 1738, had been followed ten years later by the invention of the cylinder carding machine; in 1769, Richard Arkwright had received a patent for his spinning frame, and the amazed inhabitants were discussing the startling possibilities of the power loom, only recently invented by the Rev. Samuel Cartwright. Judge Blodget made an extended visit in Manchester, England, where manufacturing was receiving marked attention, and here he dreamed dreams that were to be fulfilled in his homeland.

Upon his return, recuperated and encouraged for new and greater enterprises, the Massachusetts courts, that were frequently offering inducements to stimulate manufacturing industries, made provision for a special premium, in 1788, to any one who should engage in the manufacture of duck and sail cloth. He was among the first to improve this opportu-

nity, and he immediately established a duck manufactory at Haverhill, Mass. Fertile in his resources and ingenious in his efforts, he equipped his factory with superior machinery, which fact is shown by President Washington's description after visiting the place November 1, 1789:

At this manufactory one small person turns a wheel which employs eight spinners, each acting independently of the others, so as to occasion no interruption to the rest, if one is stopped; whereas, at the Boston Manufactory of this article, each spinner has a small girl to turn the wheel. The looms are also differently constructed from those of the common kind, and upon an improved plan.

Judge Blodget continued to run his factory until 1793, when he came to Amoskeag, leasing the plant for a term of six years. Oppressed later by his heavy outlay in building his canal he was forced finally to sell his duck factory.

The most serious problem that confronted Judge Blodget in his new home was the transportation, mainly by slow-moving ox-teams, over the poorly constructed roads of his day, of the commodities in which he dealt. In this dilemma, knowing that the whole business of the State was more or less affected by this condition, he conceived the idea of making the Merrimack River the route over which to move the merchandise of one kind and another handled in the traffic of the day. Accordingly, simultaneously with the plans of James Sullivan and other Massachusetts capitalists to build the Middlesex canal, which was to connect Lowell with Boston by an easy route,* he resolved to open the Merrimack

* The original channel of the Merrimack River from Pawtucket Falls to the sea followed almost identically the course taken by the surveyors of the Middlesex canal. This comparatively level way in time becoming filled with the debris brought down from the more rapid sections, the river, then a mightier stream than now, plowed for itself the more circuitous route to the eastward along which it has since flowed.—Author.



Portrait of Hon. Samuel Blodgett

HON. SAMUEL BLODGETT

to navigation from thence to Lake Winnepesaukee. He realized that while the Massachusetts company had an unbroken country to cross, his project meant the surmounting of the falls along the river, a feat at that time no one believed possible. At Amoskeag was one-fourth of a mile of furious rapids, with over fifty feet of descent, to overcome. The accomplishment of this herculean undertaking is more wonderful when we take into account the fact that he was at that time over seventy years of age, having reached the period in life when most men think of laying aside old burdens rather than taking on new and greater ones.

While the promoters of the Middlesex canal had formed a company of capitalists to carry out their plan, Judge Blodget decided to perform his work through his own means and endeavors. First securing possession of the land needed upon which to build his canal around the falls, he then moved from his home on Black Brook to a house he erected on the site of the new North Division Power Plant of the Amoskeag Manufacturing Company. Upon May 1, 1793, he began work upon his canal and locks, confident that inside of five years he could accomplish his purpose. He began by constructing a wing dam of wood, extending from the east bank of the river to the rocks that divide the stream near the middle of its course.

The accomplishment of the work that followed surpasses in interest and anxiety the account of any other undertaking of that period, or, for that matter, any other in the history of New England. Instead of five years Judge Blodget was called upon to exert all of the courage and resources at his command for almost fourteen years. Not only did it exact the outlay of his own handsome fortune, but time and again

he found himself obliged to resort to the assistance of friends, and finally to ask the legislature the privilege to raise money by lotteries. At this day it is difficult to comprehend the obstacles and opposition he encountered, not only from natural conditions, but a large number of men who, either through envy or ignorance, looked upon him as a demented old man bent upon squandering money in a wild scheme that would profit no one if accomplished. Twice an attempt was made to prove that his work was completed, and each time dismal failure in the application of his locks followed. Still the brave pioneer of progress persevered, undaunted by the desertion of friends, ridicule of opponents and non-success of his plans. And at last, on the morning of May 1, 1807, just fourteen years from that morning when he began his great work, he rode in triumph through his canal, amid the plaudits of not only his admirers, who had stood by him through the ordeal, but the praise that even enemies could not withhold.

Great as was the accomplishment of his canal it was not the limit of Judge Blodget's ambition nor the boundary of his conception of the possibilities that belonged to Amoskeag Falls. He seems to have been the first man to anticipate the great hydraulic power vested in the tumbling waters of the "hideous" rapids. While in the midst of his work upon the canal and locks, he built a saw mill just above the bridge. This privilege he had bought and utilized in forming the pool at the head of his canal. His own resources being employed in the construction of the canal, he tried to interest some of the wealthy men of Boston, where he was well known, to invest capital in mills to be erected on the same sites of those I am soon to describe. Among others he endeavored to induce William Gray, one of the richest men in New England at that time, to start a nail factory.

Nothing daunted by the lack of public confidence, he boldly asserted: "As the country increases in population we must have manufactures, and here, at my canal, will be a manufacturing town that shall be the Manchester of America."

The venerable conqueror lived four months after the opening of his canal, long enough to arrange his business affairs and clear his name with those who had preferred charges against him, when he died on September 1, 1807, ripe in years and filled with the honor of a busy life, whose crowning achievement was the greatest event of that period.

On the monument in Valley Cemetery to the memory of Judge Blodget was placed the simple statement: "Pioneer of Internal Progress in New Hampshire." This is but a modest recognition of the life-work of him who could be appropriately styled the god-father of our city and its greatest industry.

Derryfield from the outset, had been but a compromise name, and in 1809, only two years after the opening of his canal, when the people began to awaken to the spirit of his prophecy, they commenced to talk about a change. At the annual meeting, March 13, 1810, it was voted to petition the state legislature to make Manchester the name of the town, and the request was granted without opposition on June 13th.

Upon the decease of Judge Blodget his grandson, Thomas Stickney, assumed the responsibility he had laid aside, and had the latter's health been equal to his ambition he would have proved a worthy successor to his grandfather. As it was, the industry developed slowly, so that it was not until the organization of the Merrimack Boating Company in 1814 that through trips to Concord were inaugurated. Then ensued thirty years of uninterrupted and successful traffic upon the river. The season began as soon as the ice had

cleared, and continued until the biting cold of November or December compelled its cessation. The passage of Middlesex canal occupied one day, Cromwell's Falls, fifteen miles above Lowell, was reached on the second nightfall, while the old Blodget house, the common rendezvous here, was the third stopping place. Barring all misadventure, another day took them to Concord, but as a rule it took the fifth day to complete the arduous up-trip. The downward trip was easily made in four days. This was much easier as well as swifter, the men relying principally on scull oars for means of propulsion.

Fifteen tons constituted the average load above Pawtucket, Lowell, except in dry times, when one-half of that burden was all that could be carried—while an additional five tons could be transported between that place and Boston. The regular charges per ton were \$13.50 for several years, and then this was reduced to \$8.50, \$5 and \$4 in 1838. Before boating was begun the usual charge between Boston and Concord was \$20 a ton. The entire boating business done between the years 1816 and 1842 was for the upward trips \$468,756; for the reverse passage \$220,940. The Merrimack Boating Company was succeeded in 1823 by the Concord Boating Company, and that gave up its business in 1844. The greatest number of boats believed to have been run at that time was twenty.

Samuel P. Kidder was agent from the organization of the company to his death in 1822, when he was succeeded by Frederick G. Stark. The duty of the agent was to superintend the passage of the boats here and to collect toll. The following extracts from bills of lading are interesting, as showing the cost at the different sections of the route :



BLODGETT HOUSE

From Photograph by Thomas S. ...

...old of November on
...assage of Middlesex
...fifteen miles above
...fall, while the old
...there, was the third
...another day took
...the fifth day to
...ward trip was
...as well as
...for means of

The amount paid above Paw-
 son was one-half of that
 paid to him, an additional five
 per cent. to him and Boston.
 The sum was \$15,000 for several years,
 \$10,000 in 1837 and \$4 in 1838.
 The amount paid between Boston
 and Pawson for the boating business
 was \$1,000 for the upward
 of 1837, and \$220,940. The
 amount was paid in 1823 by the
 Pawson, who gave up its business in
 1823, and it is believed to have been

There was a change in the organization of the
 who he was succeeded by
 the agent was to super-
 and to collect toll. The
 of ... are interesting, as
 of the route:



BLODGETT HOUSE

From a Painting by Thomas Nickney, Jr.

No. 97	Daniel Jones	18 Shotts.
July 8, 1829		
Bow Canal	103M Pine Lumber and Timber at 34	\$35.02
	62M Shingles at 03	1.86
		<hr/>
		\$36.88
Hooksett Canal	103M Pine Lumber and Timber at 18	\$18.54
	62M Shingles at 2	1.24
		<hr/>
		\$19.78
Amoskeag Canal	103M Pine Lumber and Timber at 50	\$51.50
	62M Shingles at 6	3.72
		<hr/>
		\$55.22
		<hr/>
		\$111.88

Paid July 28.

The above bill shows the cost at the time when the canal was doing its best work, while the succeeding account was among the last made, but shows that ship's timber was an important item in the traffic :

Joseph Noyes to the Proprietors of the Amoskeag Canal, Dr.
1844

May 27th	To Tolls	57 Tons	Masts at 30	\$17.10
"	"	22 "	Spars at 25	5.55
"	"	154M	Pine Logs	77.00
		84M	Shingles	5.04
		32M	P L	16.00
				<hr/>
				\$120.64

For thirty-five years Blodget's canal made the Merrimack the highway of traffic in Northern New England, and a great amount of merchandise, not the least of which was lumber, was moved along its course. The boating days were among the most exciting in the history of the town, until the advent of the railroad completely changed the situation.

With the usual perversity that the people display whenever any new and far-reaching innovation is made in the conduct of business or affairs that affect the public, the building of the railroad aroused bitter opposition. Something of the spirit of the event is shown in the following news item taken from the Boston Transcript of September 1, 1830:

"It is not astonishing that so much reluctance exists against plunging into doubtful speculation. The public itself is divided as to the practicability of the railroad."

A member of the Massachusetts legislature was on record as saying: "Railroads, Mr. Speaker, may do well enough in the old countries, but will never be the thing for so young a country as this. When you can make rivers run backward it will be time enough to make railroads." Notwithstanding this mighty alternative, the Merrimack continued to run according to the laws of gravitation, while the railroad came, and, in the irony of fate, ran parallel with the waterway whose industry had been ruined by its coming.

CHAPTER II

FIRST COTTON MILL AT AMOSKEAG.

WHILE it is not known at this day that Judge Blodget was directly connected with the enterprise, it is quite certain that during the final stages of building his canal, there was constructed and put in operation the cotton mill which was the pioneer of the coming great industry of Manchester. The accounts of the success of the little body of manufacturers at Pawtucket, R. I., of whom Samuel Slater was the leading spirit, reached the interior of the country, and Charles Barrett, a man of considerable wealth living in New Ipswich, N. H., induced Charles Robbins, a machinist in the employ of Mr. Slater, to superintend the building of a mill on the Souhegan River in that town. Mr. Robbins accepted the invitation and employed Benjamin Prichard, an experienced carpenter, to construct the mill, which was completed so it went into operation on December 15, 1804.

Immediately upon finishing his work on the New Ipswich mill, Mr. Prichard, animated no doubt by his faith in the manufacture of cotton goods, came to Amoskeag Falls, where he realized he would be able to obtain sufficient water power. He was very successful in this respect, as he secured the privilege of a saw mill then owned and operated by Jonas Harvey, and standing at the Amoskeag Falls just below the entrance to the bridge that spans the Merrimack to-day. Mr. Harvey says under date of November 2, 1852:

In the summer of 1804 I was living at Amoskeag in Goffstown. I owned a saw mill there standing at the head of the Falls. I let Mr. Benjamin Prichard have the privilege for a cotton mill. He dug a canal in a ledge which passed under the ways of my saw mill. During the season he put up his mill on a bluff below my saw mill. I assisted in raising the frame of his mill and was the first who got upon the plate of the frame, and I distinctly remember that it looked rather dangerous, at such height above the boiling water.

The fall after, I sold my mill to Capt. Ephriam Stevens and in February, 1805, moved upon the farm where I now live.

(Signed) Jonas Harvey.

Mr. Prichard's mill was a small wooden building, as were nearly all of those erected at that period, with one story and rough finish. He seems to have commenced operations in the fall of 1805,* so the manufacture of cotton was begun here almost, if not quite, simultaneously with that in New Ipswich. But the mill was fitted up with second-hand machinery bought of Mr. Slater, and it failed to do satisfactory work, or at least at very much profit. So this pioneer of enterprise met with obstacles that must have discouraged a less energetic person, though he persevered while making slow headway.

When Capt. Ephriam Stevens came into possession of the Harvey mill and water power, he took in as partner his brother

* Mr. Potter, in his history of Manchester, fixes the date of Mr. Prichard's mill at Amoskeag in 1809, and he says that he had previously operated a mill on the Goffe Place in Bedford. I fail to find any evidence to show that Mr. Prichard had a mill in Bedford, while the letter quoted above is good proof that he did come to Amoskeag at least four years before the time stated by Mr. Potter. The latter wrote that part of his history in 1851, in a hap-hazard manner, and seems to have become aware of his mistake later. In justice it should be said that all other writers have given the same date, for the reason that they all copied from him. Let it be said to his credit that Mr. Potter was the only one who wrote of Manchester in those days. If he wrote somewhat carelessly, still much is due to him, and he deserves a generous meed of praise.—Author.

Robert, and later an uncle, David Stevens, was associated somewhat with them. A wing dam of wood was built from the west bank of the Merrimack to the rocks where Judge Blodget had stopped his dam when beginning work on his canal. This method of obstructing one-half of a stream while leaving the other open was common in those days, and often the sole alternative where a party owned the rights only to the middle of the waterway. The Stevens brothers, on March 10, 1810, having previously become interested in the new manufactory, gave a bond to Benjamin Prichard of two thousand dollars:

To keep in good repair their mill dam at Amoskeag Falls so as to turn (into) the channel, conveying the water to the cotton and woolen manufactory, so much water as shall be sufficient for carrying an old-fashioned under-shot wheel for a corn mill at all seasons of the year, and on all days of the year, so long as water is needed to carry on the manufacturing of cotton and wool in that place, by said proprietors paying annually to said Ephriam and Robert Stevens \$10, viz. \$5 to each.

It is probable, though not certain, that Messrs. Stevens invested some money in the enterprise. Prichard had already enlisted the interest of others, and on January 31, 1810, a company was organized under the name of "Proprietors of the Amoskeag Cotton and Wool Manufactory." This was the first time the word which has since become world-known was associated with the manufacturing of this vicinity. The hamlet where this new industry was slowly developing, it should be borne in mind, belonged then to Goffstown and was not joined to Manchester until 1853.

The four men whom Mr. Prichard succeeded in enlisting in his enterprise were Messrs. James Parker and David McQuesten of Bedford, Samuel P. Kidder and John Stark, Jr.,

of Derryfield. This company enlarged the original mill into a wooden building of two stories, forty feet square, as a cotton manufactory, and they immediately began the spinning of cotton yarns. But the capital was still inadequate to meet the development of their industry, and in order to raise the necessary money it was thought wise to petition the state legislature for an act of incorporation, which was granted under the style of Amoskeag Cotton and Woolen Manufacturing Company, June 5, 1810, at the same session which conferred upon the town across the river a change of name eight days later. So it can be truthfully said, that, while a beginning had been previously made, definite action towards a substantial effort was taken at practically the same time.

The first directors' meeting was held within a few days, when James Parker was chosen president of the new corporation. Jotham Gillis was elected clerk, and Dr. William Wallace of Bedford was chosen agent. Dr. Wallace declining to serve in the last-named office, Mr. Gillis was elected to the position and accepted. By the time the Company had got fairly started the second war with Great Britain began, but instead of injuring the industry it proved beneficial to the new corporation. The influx of foreign goods was checked and the home market was thus made better. So the business at Amoskeag prospered and the success of manufacturing seemed assured. But at the close of the war of 1812-1815, in consequence of the large amount of goods rushed into the country from abroad, with all other factories in New England, the Amoskeag Company was completely prostrated through no fault of its management.

If struggling vainly against adverse conditions for seven years, there is much to commend in the efforts of these pioneer

manufacturers. It is interesting to note the simplicity and crudeness of the ways and means of this old, unpainted, wooden mill as compared to modern methods and machinery. At the outset the only machine which had been put into action was the spinning jenny, invented by Hargreaves and first operated in England in 1767. This was considered a wonderful invention, as by means of eight spindles set in a frame as many threads could be spun, while previously it had been possible to spin only a single thread. Some spinning frames to-day have over three hundred spindles.

The picking was then performed by hand upon a frame a little over two feet square crossed at right angles by hemp cords drawn about half an inch apart. Boards were placed on three sides, and the contrivance was fastened upon posts at a convenient height for the workman. The cotton was placed on this and whipped with two long, slender sticks usually made of ash or oak. This rude affair could be operated by a boy. The weaving was done on hand looms by the women of the neighborhood, who were anxious to earn a little money, and it was said that a "smart weaver" could make thirty-six cents a day. It was one of the duties of the agent to distribute the yarn among the scattered employees, and take back to the mill the products of their work. So it was no uncommon sight to see Mr. Gillis, or one of his successors, riding horse-back about the country, fairly enveloped by big bundles of yarn secured to the saddle.

Finding the old machinery utterly incapable of doing the work he desired, Mr. Prichard employed an expert machinist of Smithfield, R. I., Preserved Robinson, who in later life lived in Loudon, N. H., to build an Arkwright Spinning Frame. This was a recent invention of spinning by rollers, and the

one built here at Amoskeag was the first made in the state, and so far as I have been able to learn, the first in operation in New Hampshire. Mr. Robinson also made a machine for winding balls of cotton thread, the first ever seen in this vicinity. He began work on June 22, 1811, and seems to have spent his time here until late in 1812.

There was little change in the outfit of the mill until 1819, when a power loom was introduced by a Mr. Babbitt, who was at that time in charge of the mill. This machine was the invention of a clergyman, the Rev. Dr. Cartwright, who had no practical knowledge of mechanics, and it created a great disturbance in the industrial affairs of England.

As these innovations in the methods of manufacturing and the introduction of improved machinery marked the beginning of the success of the industry, without the feeling of opposition that had arisen elsewhere, it may not be a waste of words to briefly describe them in their order. The first step was taken by John Kay, when he patented May 26, 1733, a fly shuttle, by the operation of which "the weaver sits in the middle of the loom, and pulls a small cord, which casts the shuttle from side to side at pleasure. The cloth is more even than it is where the layer is pulled by two men, one at each end of the loom." This device was not generally used until Robert Kay, the inventor's son, arranged a drop box by means of which the weaver could manipulate several shuttles, with weft of different colors.

The first patent taken out for spinning by machinery was by John Wyatt, of Litchfield, England, in the name of Lewis Paul, June 24, 1738. The methods of operation were three-fold, only one of which, known as the third process, was put into operation. This is described as follows :

A pair of rollers is used, and then the bobbins, on which the yarn is spun are so contrived as to draw faster than the rollers give, and in such proportion as the first sliver is proposed to be diminished.

An improvement on this method was made and patented by Charles Wyatt, son of the inventor, June 29, 1758. Previous to this two cotton mills had been built at Birmingham, the machinery turned by two asses walking around an axis. These were put into action in 1741, but were not operated more than a year. Another and larger mill driven by water power was established at Northampton, the mill having two hundred and fifty spindles. For some reason this was not a success and soon ceased doing business. James Hargreaves, a weaver in Stand-still, near Blackburn, Lancashire, constructed what became known as the "Spinning Jenny" the term given out of respect for a favorite daughter of that name. A patent for a carding machine was granted Lewis Paul, August 30, 1748, by which a cylinder operating upon cards placed beneath it was introduced, the cotton being taken from it by hand. Improvements were made upon this, in 1772, by John Lees, who invented the feeder, and by James Hargreaves, who devised the crank and comb for taking the cotton from the cards, and still another improvement by Thomas Wood, in 1774, by fastening the cards on the cylinder spirally instead of longitudinally and obtaining what was known as the endless system.

With all these inventions and improvements it was left for Richard Arkwright, a barber, living in Preston, Lancashire, to perfect the experiments. He obtained his suggestion of improvement in the roller system by observing how a red hot iron being drawn between two pairs of rollers, the second pair

moving faster than the first, was elongated by the operation. Not being a machinist, he employed John Kay, a watchmaker, to put his idea into effect.

To test his invention Arkwright began operations in Lancashire, but the people grew suspicious of his efforts. Those who had come to look to hand manufactures of cotton as the means of gaining their livelihood, believed it was his purpose to rob them of their legitimate rights. Finally a union was effected to stop his industry. A party of hand-wheel spinners entered his house by night and proceeded to destroy his machine. Frightened at this violence, the inventor fled to a place of safety. Not only were the working class opposed to him, but the manufacturers imagined that they saw in his work something that would wreak their business harm. In this dilemma Arkwright went to Nottingham, and there he built him another machine and put it into operation in seclusion. It had only eight spindles and was turned by hand. Gaining courage and confidence after a while, he increased his plant and operated his mill by horse power. December 16, 1775, he secured a second patent for additional inventions in carding, drawing and roving, as well as for spinning. Though he now escaped mob violence, public support was denied him; other manufacturers tried to ruin him by unfavorable legislation in the parliament; the traders refused to buy his goods, and to cap the climax he was sued for infringing upon another man's patent. The courts decided against him in certain respects, so he found his path strewn with thorns rather than roses.

Despite all this Arkwright proved equal to the emergency. He was an even better organizer than inventor. In due course of time he enlisted the sympathy and support of



AMOSKEAG FALLS AND GATE HOUSE

men who foresaw ultimate good in his system. Through their assistance he was enabled to build the first mill in which the machinery was run successfully by a water wheel. From that day a powerful impetus was given to the manufacture of cotton cloth in England, and factories were rapidly established in different sections. Individuals and government safeguarded these inventions, which were giving them a monopoly of manufacture, with zealous watchfulness. Previous to Arkwright's invention English cottons had been made only with the weft of cotton, the warp being linen, and it was considered impossible to spin cotton fine enough for the warp. Hargreaves' Jenny had afforded a partial remedy, but it was making slow progress. Arkwright's frame was capable of spinning the cotton thread to the required fineness and strength for the warp, and with great velocity. His machine proved so much superior to the other's it is said that Hargreaves died of grief. Arkwright's labors were eventually rewarded with success. He amassed a good fortune and was knighted in 1786. By his invention one man could do as much work as one hundred and thirty by hand. To-day it is estimated that in England alone it would require 50,000,000 hands to perform the spinning done by machinery. The Arkwright system of cotton machinery was first put into successful operation in this country at Pawtucket, R. I., by Samuel Slater, of whom I shall speak anon.*

*It is only just to say that the first machines for carding, roving and spinning in the United States were made by Alexander and Robert Barr of Scotland for Hon. Hugh Orr at Bridgewater, Mass., in the year 1786. This enterprise was encouraged by a grant from the state of £200. The Beverly Company, in 1787, began manufacturing with very imperfect machinery. The combined operations of spinning and weaving were put into successful manufacture at Waltham, Mass., in 1813, by Francis C. Lowell and Patrick T. Jackson, the latter the inventor of a power loom. This factory is believed to have been the first in the world to have combined all the processes necessary for converting raw cotton into finished cloth. The first cotton mill in Lowell was built in 1822.—Author.

The essential feature of Arkwright's invention was to spin cotton with a hard twist fit for warp. It was accomplished by drawing rollers in sets of two, the second set moving faster than the first, a swift turning spindle giving a twist to the cotton as it came out between the second pair.

Arkwright's spinning frame suggested to Samuel Crompton, an ingenious spinner of Firwood, Lancashire, the invention of another machine of scarcely less importance. This machine combined the idea of the jenny of Hargreaves with the roller spinning of Arkwright, and was better adapted to the manufacture of soft yarns than either. It was then facetiously styled the mule, or mule jenny, a term long since seriously accepted.

Another step in the progress of successful manufacture was made when the Rev. Edmund Cartwright, of Nottinghamshire, invented the power loom. It seems singular that the inventors of the different kinds of labor-saving devices for cotton and woollen manufacture were originated by persons unacquainted with machinery. This rule applies to him who quite revolutionized the methods by his invention of 1785. Mr. Cartwright had been liberally educated, and was rector at Brampton, inclined to write poetry, and was not considered of a mechanical turn of mind until he was forty years old. Within a year he perfected his invention and put it to practical application. He met with even more intense opposition than any of his predecessors, for spinners and their workmen anticipated nothing but ill from its use. The poor weaver fancied that he saw in it the enemy to rob him of his daily bread; the spinner imagined it would halve his profits, which were already low enough and allow him to meet the bare necessities of life. Unmindful of them, Cartwright soon had a factory with five hundred spindles in operation at Manches-

ter, Eng., and it was working finely. Then the aroused people, wild in their indignation, mobbed his factory by night, and applied the torch to the building, the maddened throng dancing in glee over the destruction that had been wrought.

Still the brave inventor was not discouraged. He made some improvements to his original machine, went to another town and started again. The doubting workmen realizing now their folly by an opposition that reflected upon their honesty, the inventor was allowed to carry on his manufacturing. But popular prejudice was against him. It was difficult to find a market for his goods. In fact, he derived very little benefit from his important work, until, in 1809, parliament recognizing the profit to manufacture from his invention, voted him ten thousand pounds.

It is worthy of note to add that just as England was perfecting her system of cotton manufacture, and when this secret of improved machinery was guarded so sacredly there, it was being surreptitiously introduced into this country, at the very time an invention was accomplished here that was destined to revolutionize the industrial prosperity of the land of cotton and lift this commodity into the realm of greater profit in the coming industry. This new invention was "the cotton gin;" its inventor, Eli Whitney. The story of his success is one of the most interesting in the history of manufacture.

Born in Westborough, Mass., December 8, 1765, Eli Whitney fitted himself for Yale College, graduating in 1792. Immediately after, he started for the South, where he obtained a position as teacher in a private family. On his way hither he made the acquaintance of the widow of the noted Revolutionary general, Nathaniel Greene. She was so pleased

with him that she invited him to make a visit to her home in Savannah, Ga. Cotton was then cultivated only to a limited extent in the South, from the fact that it required so much time and labor to separate the fibre from the seed as to make it unprofitable, though it grew abundantly, and, but for that drawback, promised rich returns where rice could not be raised. Mrs. Greene had discovered that her young friend possessed great mechanical ability. He had made a tambour frame for embroidery with what seemed to her remarkable ingenuity. He had fashioned other mechanical contrivances which led her to believe that he was capable of doing almost anything in the line of work.

Overhearing some of her friends discussing one day the great obstacle in the way of securing any profit from the raising of cotton, though the soil and climate were well adapted to it as a crop in the South, Mrs. Greene declared that she believed "the young man from the North" could make a "separator" that would overcome the difficulty in question. So she sought young Whitney and explained to him the crying need of the situation. He had never seen cotton nor cotton seed in his life, but his inventive genius was quickly aroused, and he resolved to study into the matter. Obtaining a small lot of cotton in the seed, he was allowed a room in the basement of the house, where he began his study and experiment. He had to make many of his tools, and the young inventor moved forward like one groping in the dark. Despite his difficulties, in April, 1793, he had accomplished his undertaking. Outsiders were called in to witness the operation of his strange machine, and they saw with amazement and rejoicing that it was capable of separating from the seed more cotton in a single hour than one person could in the old way in weeks. The

news of his invention was hailed everywhere in the South with joy. The machine was patented and the inventor taking in as partner Phineas Miller, a fellow-graduate of Yale, its manufacture was pushed as rapidly as possible. With all the benefit this ingenious piece of mechanism was certain to bring to the cotton planters, Eli Whitney failed to receive the pecuniary result that he naturally expected, so he felt obliged a few years later to engage in the manufacture of arms for the United States government, an enterprise he carried on through the rest of his life, and left the business in the hands of his son at his decease. Of the value of the cotton gin, the judge of the United States Court held in Georgia, in December, 1807, when granting a perpetual injunction against the infringement of the patent, aptly said :

With regard to the utility of the discovery, the Court would deem it a waste of time to dwell long on the topic. Is there a man who hears us, who has not experienced its utility? The whole interior of the Southern States was languishing, and its inhabitants emigrating, for want of some object to engage their attention and employ their industry, when the invention of this machine at once opened views which set the whole country in active motion. From childhood to age, it has presented to us a lucrative employment. Individuals who were depressed with poverty and sunk in idleness, have suddenly risen to wealth and respectability. Our capitals have increased, and our lands trebled in value. We cannot express the weight of the obligation which the country owes to this invention. Our sister states also participate in the benefits of this invention, for besides affording the raw materials for their manufactures, the bulkiness and quantity of the article affords a valuable employment for their shipping.

CHAPTER III

THE BELL AND ISLAND MILLS

NOT all of the hardships of cotton manufacture in those days fell upon the inventors. The pioneer manufacturers at Amoskeag Falls were meeting their share of disappointment. Despite the improvements that had been accomplished, the result was far from satisfactory to the owners of the mill. The incorporation had paid Mr. Prichard about eight hundred dollars for his mill and machinery, and the valuation of the property had not increased in proportion to the outlay in improvements and investment. Accordingly it was unanimously decided to sell out if a purchaser could be found.

During the twelve years this company had existed it had employed four agents, the three besides Mr. Gillis being Philemon Walcott, chosen in November, 1812; John G. Moore, elected April 26, 1813; Frederick G. Stark, elected at the annual meeting July 28, 1813. There were twelve stockholders at this time, all living in the vicinity and most of them farmers.

Early in the year 1822, one of the directors of the company, knowing of his investments and associations with the manufacturing business, wrote to Mr. Samuel Slater of Providence, R. I., for a loan of money to be secured by a mortgage upon the mill property. This correspondent also stated that he took pleasure in sending him a product, not of the mill, but of

the river that afforded the power to carry on the manufacturing. The offering was a fine salmon which had been caught at the foot of the falls, famous for their fisheries. While the request for a loan was not granted, Mr. Slater was so impressed with the account of the opportunity for manufacturing operations at Amoskeag, that the following summer he made a trip in his top carriage to the place, calling on his way at the mill of Kirk (Boof) then a noted manufacturer in New England. Driving through East Chelmsford he found Mr. Boot superintending a gang of laborers at work excavating for the foundation of the first Merrimack Mill.

The keen judgment of Mr. Slater quickly foresaw the possibility of success at Amoskeag Falls, and though he did not give the assistance the immediate owners of the corporation desired, he went home to encourage a man in his employ, Mr. Olney Robinson, to buy the mill and privilege. He seems to have loaned Mr. Robinson between four and five thousand dollars toward making the purchase, and October 22, 1822, the property passed from the possession of a corporation into the hands of an individual.

Mr. Robinson was a native of Attleboro, Mass., and though he had had but little experience as a manufacturer of cotton goods, he was something of a mill man. He also had a keen perspective of the future, and planned far ahead of his building. A month previous to obtaining the cotton mill he had acquired the saw and grist mill formerly owned by Jonas Harvey and later by the Stevens brothers, having selected its site for the location of a new mill he had in mind to build. Anticipating the rise in real estate that was likely to come from his proposed improvement of the manufacturing at Amoskeag, he purchased the McGregor farm of some eight hundred acres

lying along the west bank of the Merrimack and the Blodget estate of about three hundred acres on Black Brook. In his enthusiasm he entered into other real estate speculations, until it was evident his ideas were not governed by his ability to carry them out. Consequently he did not succeed in keeping the wheels of cotton and woolen manufacture turning successfully. Starting in to build the new mill he had in mind, before long he was obliged to borrow more money in order to carry on his manufacturing and building. He succeeded in obtaining a loan of \$6025.12 of Larned Pitcher, of Seekonk, Mass., and Ira Gay, of that section of old Dunstable now Nashua, N. H. Both of these gentlemen were manufacturers of cotton machinery. Mr. Robinson secured them with a mortgage on one-half of the property under date of November 6, 1824. It is interesting to note the items included in this instrument of conveyance, which are as follows:

One-half of eight acres and one-half of land on which is the new unfinished cotton factory, saw and grist mill, on the westerly side of the Merrimack River, at the head of Amoskeag Falls, also one half of the old Amoskeag Cotton and Woolen Manufactory, also the following machinery,—four spinning frames of seventy-two spindles each, one mule of one hundred and ninety-two spindles, one speeder with twenty-four spindles, nine cards, four breakers, five finishers, one drawing frame with three heads, ten power looms, one dressing machine, one warping machine, one spooling frame, etc.

By this deed we understand that the mill erected by Mr. Prichard twenty years before was still in operation and equipped with five hundred and four spindles and ten looms. The "new mill" since known as the "Bell Mill," had evidently not progressed far in its construction. This is the last mention



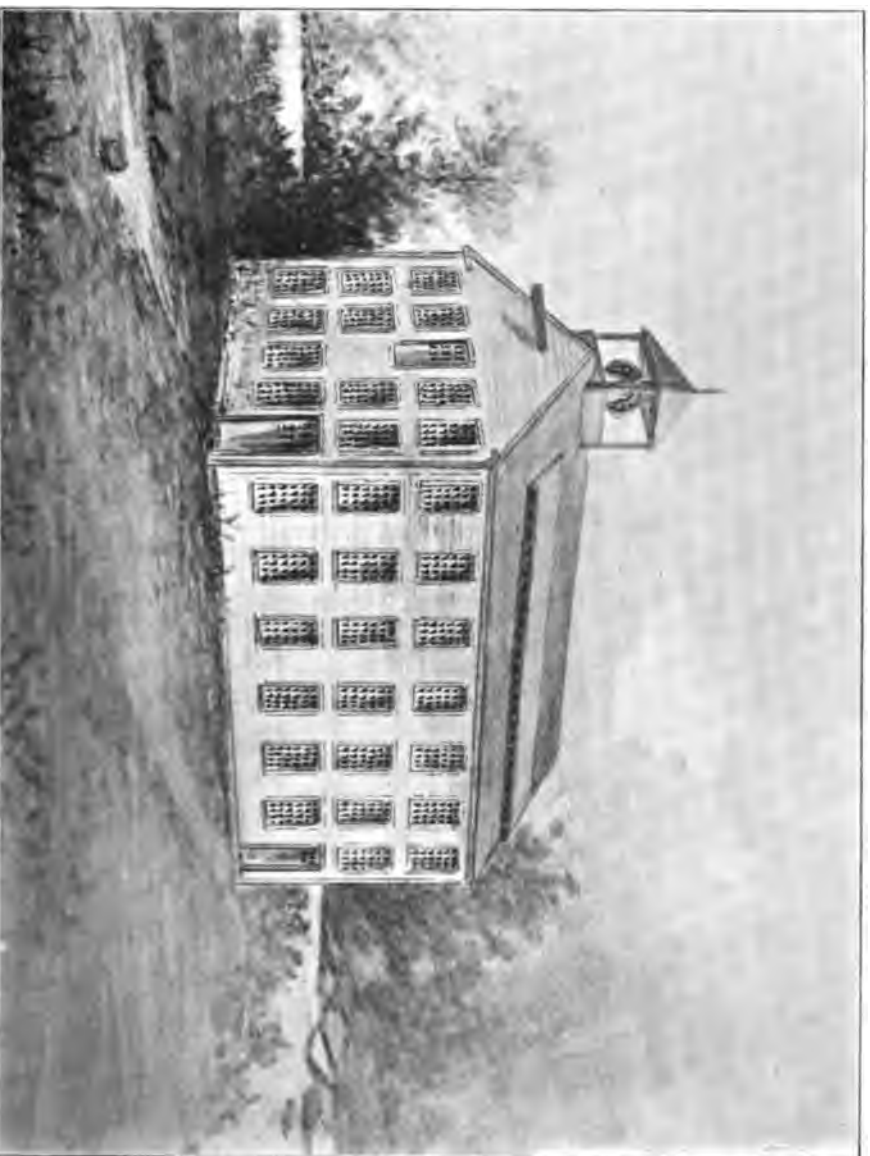
OLD MILL

COMPANY

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OLD BELL MILL.

From a Painting by J. Warren Thayer

that is made of the saw mill, which had stood for more than a quarter of a century, a conspicuous landmark of the beginning of industry at Amoskeag Falls. It was probably torn down before the completion of the new mill, for the latter must have stood nearly on its site. It is claimed by those who remember this factory that a part of the foundation wall on the southeast corner is still visible a little above the site of the Cheney paper mill. It must be remembered that the contour of the bank above this spot has been somewhat changed with the building of the bridge; that there was a bend in the river which does not show now, and that where the entrance is made to the bridge considerable filling was done. There was a space of about twenty feet between this mill and the old mill, which stood below. The latter stood upon a slight bluff, and below it was the path which gradually grew into a roadway leading down to Ben's Bridge spanning the west branch of the river over to Fishing Island, on which there was soon to be erected yet another factory, with machine shops, boarding houses, and other buildings.

While Mr. Robinson possessed unbounded enthusiasm, which is a valuable asset, yet the men most interested in his efforts, the mortgagors, soon realized that he was not likely to be successful. So, on January 24, 1825, within three months of making the loan they foreclosed the mortgage, and came into possession of one-half of the mills and machinery. On May 6, of the same year, Mr. Slater paid Mr. Robinson three thousand dollars for the other half, and cleared him of all interest and obligations in the mills.

The three owners, Messrs. Pitcher, Gay and Slater, with years of experience and entire confidence in the ultimate success of the undertaking, decided to enlarge the plant by

finishing the second mill and by building another on the island. To do this they interested other parties in the enterprise, the new members of the company being Dr. Oliver Dean, of Medway, Lyman Tiffany, of Salisbury, and Willard Sayles, of Boston, Mass. The conveyances by which this company was organized show that Messrs. Slater, Dean, Tiffany and Sayles became each the owner of one-fifth of the stock, while Messrs. Pitcher and Gay retained one-tenth each. This organization was completed December 17, 1825. Oliver Dean was chosen agent, and the title of the new firm became "The Amoskeag Manufacturing Company." From the formation of this company, under the name that has become widely known, begins an unbroken story of the rise and progress of manufacture at Amoskeag Falls.

Little seems to have been done by the new company during the winter, but in April, 1826, active operations were begun. Dr. Dean was re-elected agent, and Lyman Tiffany was made president, while the board of directors was composed of Messrs. Slater, Sayles, Pitcher and Gay. With experience and sufficient capital at their command, the new owners began at once to develop the resources of their purchase.

The Old Mill which Mr. Robinson had repaired, was fitted with improved machinery, so it soon became a scene of activity. The new building which he had begun to build, eighty by forty feet and two stories, was enlarged sixty feet in length and twenty-five in width, while another story was added to its height. This mill, now one hundred and forty by sixty-five feet in size, was equipped for the manufacture of ticking. In 1827 the company erected another building eighty by forty feet on Fishing Island, reached by Ben's Bridge. This

building was originally intended for a machine shop, but the manufacture of ticking had become so profitable that it was enlarged fifty feet in length by thirty in width and fitted to make the same kind of goods as were being turned out in the second or "Bell Mill," as it was known. A small machine shop was soon after built on the mainland not far from the Old Mill, and later another shop of this kind was erected on the Island.

The fabrics manufactured by the three mills soon became widely and favorably known as the "A C A" ticking. The trade mark was probably taken from the initials of the Amoskeag Company, with the suffix A signifying the best quality. So well did these goods merit the term the talismanic letters soon made the mills famous. And this well-earned reputation, which was the foundation of its prosperity, has been the motto of the Company in all the vicissitudes and successes of a long and creditable career.

The three mills and their environments presented a most picturesque appearance. The oldest was beginning to show the evidence of its age, while it stood so nearly overhanging the precipitous bank of rocks that it almost threatened to fall into the river. Just across the mill yard was a small machine shop and beyond this the cluster of dwellings which had recently been built by the company for the accommodation of its officials and operatives.

A little more than a rod above this weather-beaten structure, equally as close to the rocky bank, and nearer the foaming waters of the rapids, stood the larger factory already designated as the "Bell Mill," on account of the bell which hung in its belfry, rung to call the operatives to work in the early morning, and to warn them at nine o'clock in the evening.

to discard the cares of the day and seek the repose of night that they might find renewed strength for another day's toil. A memorial of this pioneer factory exists in our curfew bell, which regularly reminds us that the life of our city dates its beginning from that monitor across the river, when the three small mills were laying the foundation for future enterprises that were to make the coming city the metropolis of the state.

Just below the lower or old mill was a well-worn path leading down to "Ben's Bridge," which spanned the branch of the Merrimack running between the western mainland and the island. The river, swollen by the floods of spring, made it a difficult undertaking to reach the island during the fishing season, even in the canoe made by "Uncle Sam" Stark, who was noted for making the best canoes ever used at the Falls. As the island was a favorite fishing resort, as early as 1804 Judge Samuel Blodget planned to build a serviceable bridge across the stream, and he intrusted the work to his son Benjamin. It proved no easy matter to throw the massive timbers, two giant pines cut in Goffstown, across the surging waters. But the young bridge builder proved equal to the undertaking, and his work became known as "Ben's Bridge." It was over this structure, twenty-five years and more later, that the operatives in the Island Mill passed and repassed daily going and coming from their work.

The Island Mill, so called for reasons that must be obvious, stood upon that historic spot of land dividing the river below the Falls. Before the advent of the white man it was a great fishing place for the Indians, and when they were finally deprived of their rights elsewhere the island was allowed them as their heritage. Hither they and their descendants were in the habit of coming annually for a long period, and

then more irregularly until their last visit was made in 1848. During one of their visits, in the heyday of manufacture there, a young Indian couple were married on the isle, the ceremony made picturesque by a combination of civilized and barbaric services. The bride was attired in a gown made of bright red silk bandanna handkerchiefs, which the residents had collected and made into a dress very much to her delight.

Amoskeag had now become a unique factory village, one of the pioneer hamlets in the country, where the mills were the magnets to draw many of the best and brightest of the sons and daughters of northern New England.

Labor never stood higher in public opinion, which rules the standard of society, and the factories were the most attractive places to earn an honest dollar. They offered, too, the first opportunity for women to obtain direct remuneration for work away from home. If the pay seems small in the comparisons of to-day, the demands for personal comfort were less in proportion, a few dollars sufficing to afford the necessities as well as the luxuries of life, so that few, if any, went back to their homes, or to new homes of their own making, without well-filled purses. So rapidly had people settled about and in this new town, there could not have been less than a hundred families living within reach of the mills, most of them on the west side of the river.

In those days the country traffic was wholly carried on by boats that plied on the Merrimack between here and Boston, or by the heavy, canvas-covered wagons moved by slow-going ox teams. Stage lines ran daily through the place, stopping for dinner and to exchange passengers, it might be, at Amoskeag Inn, thus keeping the little manufacturing hamlet in touch with the world. So far and wide had the fame of

the new mills extended that it was no uncommon sight to see a whole load of passengers set down at this famous hostelry, who had come all the way from the homes of the Green Mountain State to work in the factory. They were a robust, good-natured class of fortune-seekers, not a few of whom have descendants with us to-day. Altogether the picture was one of great promise, and Amoskeag was beginning to take on the air of importance belonging to the thriving centre of population that then seemed certain to become the metropolis of the Merrimack.

Yarn was spun by hand and its neat skeins were the common currency of trade. The operatives were paid with it, the grocer received it for his goods, the landlord for his rentals, the promoters of the industry got it for remuneration for their services, and even the grizzled, old stager, Robbins, who was a familiar figure in those days and scenes, took it as fare, finding easy disposal of it as soon as he had passed beyond the radius of its manufacture. So yarn was legal tender everywhere, and no one was the poorer.

The three mills that were the source of this thrift and prosperity were all consumed by fire. The Island Mill was destroyed on the morning of May 14, 1840, the first fire of importance within the present territory of Manchester, and at the time it was the topic of considerable discussion and not a little regret. The Bell Mill and its older companion, with the machine shop, were burned on the night of March 30, 1848. Already the tide of manufacture had started on the opposite side of the river, and no more mills were built to take the places of these pioneers. But there were other buildings of more or less importance erected on the island. The last boarding house left standing at the time of the fire remained



AMOSKEAG BRIDGE AT THE FALLS



AMOSKEAG BRIDGE AT THE FALLS

until in the early sixties when that, too, fell a victim to the flames. James Humphrey built a machine shop on the site of the factory. Besides this there was a foundry, a dye house, and in 1845, John Cleworth & Son had a reed shop close by. Cyrus Baldwin was foreman of the shops owned by the Company. A few years later he invented a seamless bag that proved valuable. Among the workmen who became more or less noted were Samuel H. Roper, who made the first steam carriage, and George A. Rollins, maker of steam engines in Nashua for several years. No doubt there were other buildings of perhaps less account, but fire on a summer night in 1862 destroyed the lot, and the manufacturing industry then being firmly located on the east bank, the island ceased to be a centre of activity. The rocky isle, partially clothed with a growth of stunted bushes, affords but a waning memory now of the times when it was the most famous resort in New England, or a part of the scene where a great manufacturing industry began. No successor of "Ben's Bridge," spans the river, while "Uncle Sam's" canoes have vanished with a day that is no more, so whoever would visit the storied spot must do it at risk of limb and life.

CHAPTER IV

LAND AND WATER POWER

IN those days, when Amoskeag flourished and the West Side, with promise of future prestige, was the scene of activity and progress, across the Merrimack were acres of sand dunes, a picture of desolation framed in with a background of pitch-pine forest, and a frontage of free-running river. It is true there were a few farms scattered over the landscape, like oases in a desert; there were life and bustle along the canal, with its moving flotillas of lumber rafts and boats of merchandise; there were, too, the hustle and uproar accompanying the fisheries of the spring months; but no indication of the fulfillment of Judge Blodget's dream.

While the success of the little body of manufacturers had been such as to warrant them the assurance of pushing ahead along broader lines, it was felt, also, that the time had come when private effort must be succeeded by corporate endeavor. A meeting of the six owners of the mills, Ira Gay, Oliver Dean, Willard Sayles, Lyman Tiffany and Larned Pitcher, the latter also acting as attorney for Samuel Slater, was held in the counting room of the Bell Mill, and a petition was drafted asking the state legislature then in session power and protection to raise one million dollars, an almost fabulous sum for those days, with which to develop the business they had planned to execute. Again the state legislature looked with favor upon the request of the struggling manufacturers, and the Amoskeag Manufacturing Company was incorporated

according to the laws of the State of New Hampshire on July 1, 1831, with an authorized capital of one million dollars. ✓

Five days after the last incorporation the partners of the old firm met and conveyed its property to the new corporation for one hundred thousand dollars. At eight o'clock sharp, on the evening of July 13, of the same month, another meeting, the first under the new regulations, was held to perfect the organization of the Amoskeag Manufacturing Company. Dr. Oliver Dean was chosen chairman, and Ira Gay clerk of the meeting. A committee of three was selected to draft by-laws to govern the company, and an adjournment was made until the following morning at eight o'clock at the same place. At that meeting the by-laws offered by the committee were adopted, and the annual meeting appointed to be held on some date in July. Lyman Tiffany was chosen the first president; Ira Gay, clerk; Oliver Dean, treasurer and agent; Lyman Tiffany, Ira Gay and Willard Sayles, directors. It could now be said that the Amoskeag Manufacturing Company was a reality and prepared to begin its career in earnest.

The first mill at Lowell had been set in operation in 1823, and others built there since; in Lawrence cotton manufacturing had begun, so that manufacturing could be said to be in a progressive condition along the Merrimack River where its waterfalls afforded excellent facilities. It was during this initiative period that M. Chevalier, the noted French economist, who had been sent to this country to inspect the public works of the United States, while visiting the manufacturing of the Merrimack valley, said:

The inhabitants possess to the highest degree a genius for mechanics. They are patient, skillful, full of invention; they must increase in manufactures.

Dr. Dean was continued as Agent and Treasurer of the Company until the annual meeting, 1834, when he declined to serve in the first capacity any longer, having decided to throw aside a part of his burden, but he accepted the office of Treasurer. A little later he retired to his beautiful farm in Framingham, Mass., where he lived until 1843, when he removed to Boston. But he did not relinquish his interest at Amoskeag.

The founders of the Company had been ambitious and not limited by current influences or conditions. The leaders looked forward to the founding of an enterprise that should be worthy of the power located here. The first object then to be obtained was the right of eminent domain, not only for the water privilege but for the ownership of such land as would be needed for the sites of future mills. Ay, they went another step and sought the possession of adjoining territory that at sometime would be the heart of a large town, certain to follow the development of their resources. Accordingly they quietly began purchasing the adjacent land, until their deeds covered over seven hundred acres of country on the west side of the Merrimack. This land, as well as subsequent purchases, was not bought as a matter of immediate profit or for speculation, but to enable the Company to fortify itself for work and for the benefit of the coming metropolis, which they anticipated with as sanguine an expectation as that of Judge Blodget, when he foresaw the inevitable utilization of the hydraulic power inherent in the "hideous" rapids of Namaske.

A reconnoissance by competent engineers showed that not only could the hydraulic power of the river be more conveniently utilized on the east bank, but the natural features of the adjoining land afforded better conditions for the erection

of mills. Thus their purchasing agents enlarged their field of action, and before the close of the year 1834 the Company was in possession of the territory from above the Falls and extending south to Merrill's Road, now Young's Road, which led to Merrill's ferry; east to Robert Hall's farm and Israel Young's; north-east to Wilson & Jackson's property; north-west to the farm of Moses Davis. The wisdom of this action has been proven by the results that have followed. It has given our city streets laid out with regularity and directness; the building scope wider and healthier dimensions; in truth, it has added beyond estimation to the general attractiveness whichever way one turns. This policy was extended outside of the town limits in order to obtain complete control of the water power of this section of the Merrimack. At the annual meeting July 8, 1835, Harvey Hartshorn was chosen Agent, and at the meeting it was unanimously voted that the Company gain control, possession if possible, of the water privileges between Amoskeag and Concord. Negotiations were accordingly immediately begun with that object in view, and the first property acquired was the mill at Hooksett. The stock of the Hooksett Company was taken by Willard Sayles, 24 shares; John Nesmith, 18 shares; Richard H. Ayer, 10 shares; Isaac Hill, Concord, 10 shares; Foster Town, 4 shares; Samuel Bell, 4 shares; Thomas Nesmith, 2 shares. These 72 shares were appraised at \$400 each, and the holders were given an equal number of shares in the Amoskeag Manufacturing Company at \$1,000 a share, the difference in the amounts being equalized by cash or notes bearing interest.

At the time the Hooksett Mill was merged in the Amoskeag Company it had about 7000 spindles. The company

was organized in 1823, and began at the time the manufacture of a new line of fabrics in these parts, the making of mousseline de laines. While the experiment proved that there were promising possibilities in this direction the venture was not entirely a success. No particular difficulty was encountered so far as manufacturing the fabric was concerned, yet the machinery of the mill would not produce satisfactory results in the printing. Thus the cloth was sold to a firm in Taunton, Mass., which had improved machinery capable of finishing the work. The result under the management of the Amoskeag Manufacturing Company I shall have occasion to describe later on.

In October and December of 1835 the Company obtained possession of the Union Locks and Canal Company in control at Amoskeag Falls, the Isle of Hooksett Canal Company and the Bow Canal Company. April 27, 1836, the Concord Manufacturing Company, owning over a thousand acres of land and controlling the power at Garvin's Falls, was merged into the Amoskeag Manufacturing Company. The stock of the former company was taken at one thousand dollars, paid in sufficient shares of the Amoskeag at one thousand dollars each. The Amoskeag Manufacturing Company now possessed full control over all the water power on the Merrimack between Sewall's Falls at Concord, and as far south as the limit of Manchester. May 19, 1892, the Amoskeag Manufacturing Company disposed of the land about Garvin's Falls and the water rights which they had purchased of the Concord Manufacturing Company, in 1836, to William A. Russell, of Boston, trustee for the Garvin's Falls Power Company, the latter company holding the same until November 20, 1899, when the land and water privilege

passed into the possession of the Manchester Traction, Light and Power Company.

Besides these interests the Company obtained by purchase two and forty-four one-hundredths of an acre of land in Litchfield nearly opposite Moore's Falls, and also one and one twenty-seventh of an acre on the west side of the river at Cromwell's Falls, about a mile below Thornton's Ferry in Merrimack. July 31, 1908, the Company purchased of the Spaulding, Jones Power Company eight acres of land on the west bank of the river in the town of Merrimack, bounded as follows:

Beginning at the southwest corner of said land, at a point on the easterly line of the land of the Concord & Montreal Railroad; thence easterly to a point or bound on the Merrimack River about three rods above or north of Dimplin Brook; thence northerly by the Merrimack River to land of Horatio Bowers; thence westerly by said Bowers land to the land of the Concord & Montreal Railroad; thence southerly by said railroad land to the point first mentioned, containing about eight acres.

At the same time possession was secured of a tract of land lying in Litchfield, and adjoining on the south the Company's land in that town, together with "all the right, title and interest of every kind, nature and description, which we (Spaulding, Jones Power Company) or any of us have in and to said land or water rights, in the Merrimack River, between Manchester and Nashua, N. H." Taken in its completeness the acquisition of this long series of the water rights of the Merrimack River, as held by the Amoskeag Manufacturing Company to-day, cost a large amount of money, to say nothing of the difficulties sometimes encountered in obtaining the title.

The new Company having become fairly started upon its plan of development and improvement, no cessation of activity was allowed. The progress was not spasmodic but moved evenly and constantly onward. Those were busy years, not so much in the manufacturing department, though every spindle was kept in motion, as in the application of more power, and in the construction of new buildings and the fitting of them for an increasing volume of business.

The year 1836 witnessed the beginning of actual work in carrying out the plans of manufacture on the east bank of the Merrimack. The wooden sections of the early dams, built by Samuel Blodget and Gen. John Stark, for the benefit of their mills on the eastern bank of the river, and the Stevens brothers on the west side were repaired, and the following year workmen began the construction of a new stone dam, with guard locks. The walls of the latter portion were made of solid masonry a few yards below the entrance to the Blodget canal, and a basin or reservoir was formed on very nearly the same site of the old Blodget mill pond. To carry the water from this basin to the "upper level," so called, a canal was cut ten feet deep and seventy-five feet wide at its entrance, but decreasing in width to fifty feet. This passage was walled with stones laid in the most substantial manner. Designated as the "upper canal," for reasons that will soon be understood, this canal extends parallel with the river for 5,480 feet, or over a mile, when, at the foot of Central Street, it discharges its water into the "lower canal" through the "upper weir," with thirteen sets of flashboards and a width of seventy-eight feet.

Another waterway, designated as the "lower canal," running between the first and the river, was constructed along

the course of the Blodget canal, until near the foot of Bridge Street, when it continued on an independent course southward to empty into the Merrimack at what is known as "the lower weir." This outlet is close by the mouth of Cemetery Brook, and near the old Namaske Mill, later Olzendam's Hosiery, and now the Southern Division store house of the Amoskeag Manufacturing Company. This canal enters the weir on a curve and is widened to about one hundred feet. It is 6,900 feet in length, or over a mile and a third.

Blodget's canal connected with the river just above the old Amoskeag Bridge, built in 1792, the year before he began work on his great undertaking. In passing it is interesting to note that this was probably the first bridge across the Merrimack, though one was built at Pawtucket Falls, Lowell, the same year, but does not seem to have been opened as early in the fall season by a few weeks. The old Amoskeag bridge became unsafe in 1848; was washed away in 1851; rebuilt in 1881, and designated as the McGregor Bridge. The first bridge at the Falls was built in 1842 at a cost of \$12,069; carried away by a freshet in 1852; rebuilt in 1854, and still spans the stream.

Blodget's canal had three locks. The first or "lower lock," as it was known, was where the canal entered the river; the second was at the outlet of a "basin," near where the paper mills now stand; and the upper one was at the entrance of the water from the river. The width of this canal varied in different sections, and it was about a third of a mile in length. There was another set of locks, though it did not belong to the Blodget system, at the foot of Merrill's Falls where the ferry-way crossed the river just above the present Granite bridge. These locks were of minor importance

compared to the others. Upon taking possession of the land and water privileges the Amoskeag Manufacturing Company was obliged to guarantee that the canal and locks should be maintained for the benefit of the public as long as needed and kept in repair, according to the obligations of the Amoskeag Falls Lock and Canal Company, whose rights they purchased in 1835. Within four years, upon the opening of the steam railroad, the canal began to fall into disuse, and in June, 1855, the state legislature granted the Company permission to discontinue the locks, which was done. The water in its descent from the upper to the lower canal falls twenty feet, and from the lower canal into the river, thirty-two feet.

At the annual meeting in July, 1837, President Hartshorn was succeeded in his office by the election of William Amory, of Boston, who held the office for thirty-nine years, and to whom belongs the credit of being a clear-headed, aggressive official, never tiring in his zeal for the Company, never deficient in his resources toward carrying out the plans relating to the ever-increasing industries

CHAPTER V

THE FOUNDING OF A CITY

THE preliminary work well under way toward the development of manufacture on the east bank of the river, early in the year 1838, negotiations were opened to purchase fourteen acres of land and the rights to the water power to run such mills as they might build, by certain men most of whom had interests in the Amoskeag Manufacturing Company, and petition was submitted to the annual session of the legislature for a charter. This act of incorporation was granted under the name of the Stark Manufacturing Company, so called in honor of General John Stark, and the capital stock was fixed at five hundred thousand dollars. The members of the new organization met on September 26, 1838, and elected its first board of officers. Nathan Appleton was chosen president; George W. Kimball, clerk, and John A. Burnham was elected agent. Nathan Appleton, George W. Lyman, Willard Sayles, Francis Cabot Lowell, William Appleton, William Amory and Samuel Henshaw were chosen as board of directors. William Amory was elected treasurer. It will thus be seen that almost the entire personnel was made up of those interested in the older company.

Immediately upon its organization the new corporation entered into an agreement with the Amoskeag Manufacturing Company to begin the construction of what has become known as Stark Mill No. 1, and which was completed early

in the following year. It was one hundred and fifty feet long, by fifty feet wide, with a picker house of thirty feet in length at the lower end.

Upon the completion of Mill No. 1 it was at once fitted with machinery, and the manufacture of cotton goods was begun on the east bank of the Merrimack. Six tenement blocks or boarding houses, as they were then called, were also erected for the Stark Company by the Amoskeag Manufacturing Company, and the transformation of the scene on this side of the river was such as to amaze the inhabitants. Bell Mill and its companions on the west side had a rival. Where is now Canal Street was then fitted with a plank walk, which became a popular promenade, when at the close of the summer days the operatives sought the open air, glad of the escape from a day's toil.

But this simple resort did not long enjoy the distinction of being the only attraction for pleasure seekers, as the transformation of the scene further removed from the river-bank had already begun, and a lively interest was awakened elsewhere. Early in the year 1838, the Amoskeag Company builded a town upon paper, and with its customary promptness of action had proceeded to carry out the plan. Surveys were made, streets were laid out and house lots plotted. The principal thoroughfare or street was planned to run nearly parallel with the river, north and south. On account of its extravagant width, as it appeared to the town's people of those days, some of the citizens wanted to christen it Broadway; but it received the more modest name it now bears from the fact that when the survey was made a large elm tree was standing at a point which is now the head of Spring Street. While it stood near the centre of the proposed



FIREMEN'S MUSTER ON MERRIMACK SQUARE, 1899

AMOSKEAG MANUFACTURING COMPANY

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But this simple resort did not long enjoy the distinction of being the only attraction for pleasure seekers, as the transformation of the scene further removed from the river-bank had already begun, and a lively interest was awakened elsewhere. Early in the year 1838, the Amoskeag Company bidden a town upon paper, and with its customary promptness of action had proceeded to carry out the plan. Surveys were made, streets were laid out and house lots granted. The principal thoroughfare or street was planned to run near parallel with the river, north and south. On account of its extraordinary width, as it appeared to the town's people, some of the citizens wanted to christen it Broadway, but it received the more modest name it now bears. It was found that when the survey was made a large elm tree stood at a point which is now the head of Spring Street. It then stood near the centre of the proposed



FIREMEN'S MUSTER ON MERRIMACK SQUARE, 1859

avenue, this magnificent tree was allowed to remain for many years, though finally it had to be encircled by a fence to protect it from passing teams. Tradition says there were other trees of this kind along the course, but there does not seem to be any proof to the claim. Twin rows of elms were afterwards planted along the sides of this street for nearly a mile, according to action taken at a meeting of the stockholders in November, 1838, when it was voted "to plant trees on Elm Street and other streets as thought expedient." The following spring this plan was carried into effect and elms and maples were set out along the main streets of that time, so in a few years Manchester became noted for its beautiful shade trees, which in this utilitarian age are too rapidly disappearing.

Chestnut and Pine, with a short section of Union Street, were also laid out, while Merrimack, Manchester, Hanover, Amherst and Concord ran at right angles from Elm to Union. Two open tracts, which have since become Concord and Merrimack Squares, each containing then a small pond of water, were reserved for places of public promenade. Sites for church buildings, schoolhouses, public edifices, cemeteries, such as a well modeled town would eventually need, were also a part of those early specifications.

Valley Cemetery, one of the most beautiful grounds in New England, was a wise forethought of those town plotters, and at least six public commons, adding vastly to the beauty and pleasure of the city, are due to their generosity and wise provisions. The streets were partially graded, and altogether there was now a striking hint of the coming metropolis.

The next step was to transfer the ownership of certain parcels of this promising property to the persons who would improve them. Accordingly a land sale was advertised, and

among the old papers and documents belonging to the Company to-day is—

PLAN
OF
LOTS OF LAND
belonging to
AMOSKEAG MANUFACTURING CO.
AT MANCHESTER, N. H.

To be sold at Public Auction,
Oct. 24th, 1838.

Thos. Moore's Lithogs, Boston.

TERMS OF PAYMENT.

25% Cash on delivery of the Deeds, the balance in three notes of 25% each, the payment thereof to be secured by a mortgage on the premises and payable in one, two and three years from the date of Sale with interest payable annually.

A Quit Claim deed will be furnished by the Company, and fourteen days allowed for examination of the title.

CONDITIONS.

All buildings on the West side of Elm Street to be of Brick or Stone & Slated.

Every lot, large or small, will be sold with the restriction that for the space of twenty-five years from date of sale only one single building, whether store or dwelling house with its appurtenances, can be built thereon.

N. B. Any further particulars will be made known at time of sale which will take place on the premises at Manchester in the rear of the mills now erecting by the Amoskeag Manufacturing Co., on the 24th day of October, 1838 at 10 o'clock A. M.

The lots at this sale were within the bounds of Elm Street north to Lowell and south to Central; east half way between Pine and Union Streets. At that time Pine stopped at Hanover running south, but was extended four years later. Laurel was not laid out then. On the west of Elm Street there were sixteen lots listed, and on the east side two hundred and fifty lots. Eighty-four lots were sold that day, while many of the others were disposed of at private sales during the following three years.

Number 4, situated on Concord Street, east of Pine, was the first lot sold for three hundred dollars to Levi Jewell. William Amory purchased the second sale, No. 5, for \$300. James Burnham, No. 6, for \$425. Wilbur Gay, lot No. 7, for \$575. A woman, Mrs. Anna Hayes, of Londonderry, was the first person to build on the land bought that day. Among the other buyers were the following well-known persons: Francis Cabot Lowell, David A. Bunton, Foster Town, Hiram Brown, Ziba Gay, Samuel D. Bell; on Concord below Pine Street, Jonas L. Parker, two lots, Willard Sayles and Samuel B. Kidder, one each in 1839.

The sale of land in 1838 was followed by other disposals of lots at auction in the succeeding years; October 8, 1839; September 1, 1843; in August, 1844, and again in September of the same year; September 30, 1845; October 21, 1846; May 3, 1879; April 17, 1880; and May 28, 1887. During all this time there were several private sales. This land conveyed to individuals or companies, it should be remembered, was nearly all located in what has since become the business section of the city, where, in many cases, one square foot to-day brings more than the entire lot did at that period.

Intervening auction sales have taken place from time to time, the last occurring on June 4, 1892, when a limited number of house lots were sold on Coolidge Avenue, Kelley, Bremer and Cartier streets.

March 18, 1912, the Company made the following offer to employees of five years standing who desired to build houses for themselves:

During the year 1912, the Company will sell and deed to any such employee, a lot of land 50 by 100 feet, in the section lying between Coolidge Avenue and Rock Rimmon.

The Company will give a deed with the ordinary restrictions, limiting the house to be built to two tenements, and will accept a first and second mortgage, each for one-half of the purchase price of the land. Should a house in accordance with these restrictions be built on the lot within one year after the conveyance, these mortgages will be allowed to remain without interest so long as the mortgagor remains in the employ of the Company and continues to occupy the house. At the end of five years, should the mortgagor continue in the Company's employ and in the occupancy of the house, the second mortgage will be surrendered for the consideration of one dollar. At the end of ten years should the mortgagor still continue in the Company's employ and in the occupancy of the house, the first mortgage will be surrendered for the consideration of one dollar. In case of death, his heirs will succeed to his rights under this agreement, but such rights cannot otherwise be transferred without the consent of the Company.

Should a house approved by the Company, be built on said land and should the builder desire to borrow money to pay for same at any savings bank in the city, the Company will arrange to give such bank, a first lien on the entire property.

Within a short time over one hundred persons signified their intentions of improving this opportunity.



FIGURE 1
A. B. KEAY AND COMPANY, LTD., LONDON, E.C. 4.

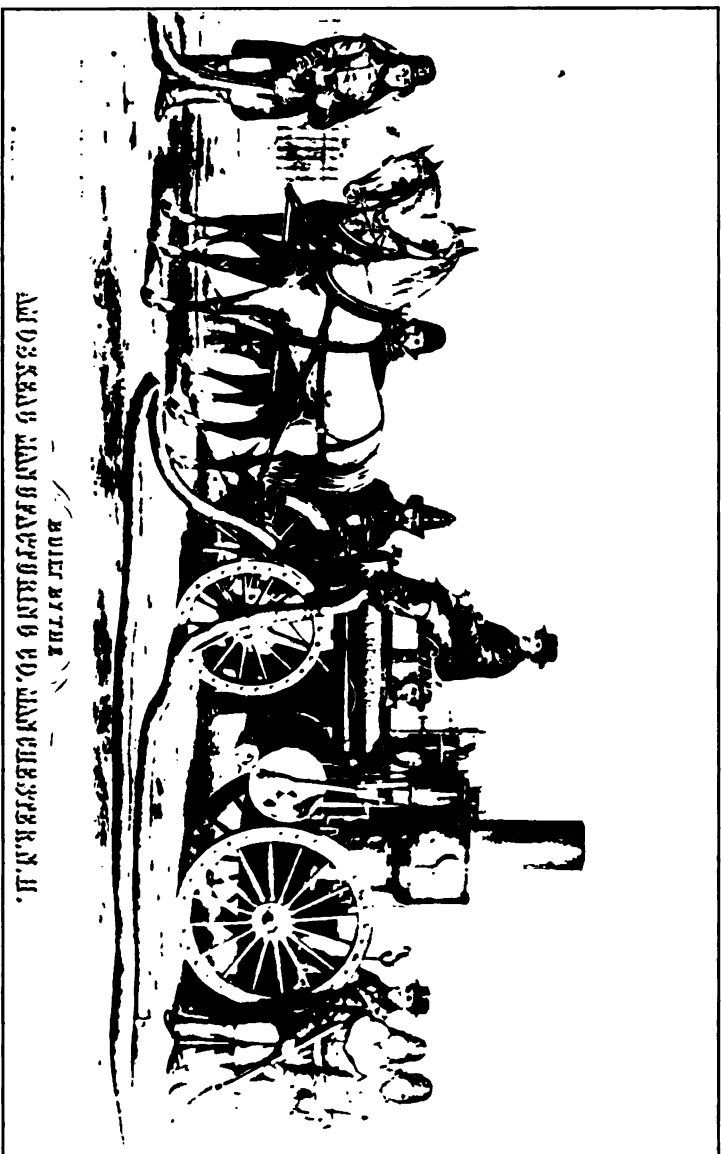
AMERICAN MANUFACTURING COMPANY

Since the Company's formation sales have taken place from time to time. On June 4, 1892, when a limited number of lots were sold on Coolidge Avenue, Kelley, Kansas.

At the time the Company made the following offer to its employees and to others who desired to build houses

During the year 1912, the Company will sell and deed to its employees, a lot of land 50 by 100 feet, in the city of Topeka, between Coolidge Avenue and Rock Rimmon. The Company will give a deed with the ordinary restrictions limiting the house to be built to two tenements, and to accept a first and second mortgage, each for one-half the purchase price of the land. Should a house in accordance with these restrictions be built on the lot within one year after the conveyance, these mortgages will be allowed to remain without interest so long as the mortgagor remains in the employ of the Company and continues to occupy the house. At the end of five years, should the mortgagor continue in the Company's employ and in the occupancy of the house, the first mortgage will be surrendered for the consideration of one dollar. At the end of ten years should the mortgagor continue in the Company's employ and in the occupancy of the house, the first mortgage will be surrendered for the consideration of one dollar. In case of death, his heirs will succeed to the lot, but not to his agreement, but such rights cannot be exercised without the consent of the Company. Any house approved by the Company, be built on said lot, and if the builder desire to borrow money to pay for the same, the savings bank in the city, the Company will advance the money, a first lien on the entire property.

At the time over one hundred persons signified their interest in improving this opportunity.



BUILT BY THE
ANDERSON MANUFACTURING CO. MANCHESTER, N. H.

The result of the awakening coming from carrying into effect the Company's plans and the building of the brick structures down by the canal is almost startling to contemplate. In 1838, when the first surveyor mapped out the streets and staked the lots for buildings only fifty people were living within the territory. In eight years it was incorporated as a city, with a population of 10,125. In 1860 the number of inhabitants had increased to over twenty thousand.

In 1841, a new brick building with stone trimmings and a frontage of ninety feet on Elm Street, with sixty feet on Market Street, erected on the Company's land, became the pride and boast of the newly incorporated city. A square clock tower rose from the centre of the ridge pole of this new town house, and this was surmounted by a huge golden eagle, supposed to be typical of liberty.

Upon November 9, 1838, immediately following the first auction sale of land, it was voted by the Directors of the Company to build a brick structure suitable for a tavern, and at a meeting by the same body February 9, 1839, this action was made more definite by selecting the east corner of Elm and Merrimack Streets for its site, and stipulating that it should have a slated roof, but should not exceed \$8,000 in cost. In 1840, Mr. William Shepherd took possession of the new hotel, the first erected in the business section of the town, and as the Manchester House it was widely and favorably known for many years.

Speaking in a business sense, at that period, Elm Street began where Shepherd's tavern stood at the corner of Merrimack Street and extended to Lowell Street, with an occasional break in the frontage of the buildings. The most conspicuous of these broken links was an open space just above the town

house* and comprising the land where Patten's block now stands, which was then devoted to a market garden.

Meanwhile factory building along Amoskeag canals, progressing with uninterrupted rapidity, was the incentive to this wonderful increase of business and population. In 1839, the Amoskeag Manufacturing Company built for the Stark corporation a second mill of exactly the same size and plan as the first. Five years later, in 1844, the Company added to these another mill standing between the two, with a frontage of one hundred feet and a pediment end surmounted by a cupola. This structure united the others in such a manner as to form one complete building in the shape of a cross, the whole factory being five hundred and twenty feet in length, including the picker houses, and six stories in height. This became known as Stark Mill No. 1 and contained 20,000 spindles and 660 looms driven by one large and four small turbine wheels, the five having a total of eleven hundred horse power, which was obtained from the upper canal.

In 1846 the Company built another factory, which was designated as Stark Mill No. 2. This mill had 19,564 spindles, 560 looms, and an aggregate of nine hundred horse power, also supplied from the upper canal.

March 16, 1850, a fire broke out in Mill No. 1, which destroyed the upper story of the north wing, the second section of that mill, and did considerable damage to the machinery. Upon refitting this mill for operation, the manufacture of

*The new town house, which was the source of so much pride, was built in 1841. On August 12, 1844, it was discovered to be on fire, and in spite of all the primitive fire department could do, was burned to the ground, tower, curfew bell, gold eagle and all. In October, 1845, another town house was built on the same site, and a new bell was placed in the belfry to ring the curfew, but the eagle found no successor. This building, with alterations and repairs, is still standing more nearly in its original design than any other building of its day.—Author.

seamless bags, an invention of Cyrus Baldwin, as already mentioned, was begun, to be carried on with success. Of the 660 looms in Mill No. 1, 260 were given over to the manufacture of bags, while duck was woven in the others. These mills which now manufacture sheetings, drillings, duck and bags, employed at that time 1,150 operatives, of whom two hundred were males. The Stark Company had sixty-six tenements. The pay-roll was \$30,000 a month; the manufactures aggregated 2,080,000 two-bushel bags, and eight million yards of sheetings and drillings annually. It could now be truly said that the great reserved power stored in Amoskeag Falls had become an important factor in manufacture.

In all the Amoskeag Company has leased to the Stark Manufacturing Company twenty-five mill powers, which that company still pays rental for. Besides these, on July 21, 1860, the Company leased to Benjamin F. Martin one mill power, and on January 26, 1866, one mill power to the Amoskeag Axe Company. The last named two powers have since been taken by the Amoskeag Paper Mills Company, so that to-day the Amoskeag Manufacturing Company furnish twenty-seven mill powers to other corporations than its own.

It will be understood that ten mill powers leased to the Merrimack Mills August 31, 1847; thirty powers leased to the Manchester Print Works (five powers December 21, 1858, nine powers March 1, 1866, and sixteen April 10, 1868;) two powers leased Namaske Mill, June 21, 1865; eight powers leased the Langdon Mills (three July 21, 1860, one May 1, 1866, three January 30, 1869, one March 23, 1872;) and sixteen powers leased the Amory Manufacturing Company, July 8, 1880;—in all sixty-six mill powers, are not considered in the above statement, as these were restored

to the Amoskeag Manufacturing Company when the latter came into possession of the former concerns.

A mill power is the right to draw thirty-eight cubic feet of water per second, where the head or face is twenty feet, and inversely proportional to this where the head is different. It is equal to about 65 horse power.

CHAPTER VI

AMOSKEAG NEW MILLS

IN 1840 The Amoskeag Manufacturing Company began the construction of two mills on the east bank of the river for themselves. These were located just below the Stark Mills, and were finished in 1841. They were fitted with machinery for manufacturing cotton goods simultaneously with their erection, and before Mill No. 2 was fairly completed work had been begun in the other. With the construction of these mills the Company laid the foundations of manufacture on the east bank of the river, upon which has been built the plant of today.

David Gillis was chosen Agent of the new mills at the time of opening them for manufacture, and he retained that position until 1856, when he resigned to be succeeded by Ezekiel A. Straw. To this latter date the various departments had been under different superintendents. The old mills at Amoskeag had been under the management of William P. Newell, from the retirement of Dr. Dean, until 1846. He was then succeeded by Phineas Adams, who held the place for a year, when the office fell to Charles W. Blanchard, who remained in control until the burning of the Bell Mill and the old Amoskeag Mill on the night of March 30, 1848. By this time the Company had become firmly established on the east side of the river, and these veteran structures were not replaced. Manufacturing was henceforth confined wholly to

the "new mills," though it was not until February 21, 1861, that the Company severed entirely its interest across the river. On that date, immediately following the destruction of the bridge connecting Amoskeag Island to the mainland, it removed its apparatus for making "batting" to the new mills. This work had been conducted at the Island about seven years. The buildings here were consumed in the summer of 1862 by a fire believed to have been set by a party of boys. So all industry was checked at Amoskeag, until in 1871 the P. C. Cheney Company started its paper mills upon the site of the old cotton mill.

The occasion of starting the machinery at Amoskeag Mill No. 1, was celebrated on the evening of November 17, 1841, at Shepherd's Tavern, where upwards of one hundred persons partook of a fine banquet followed by songs and speeches. William A. Burke was president, and among the regular toasts was one to the "Machinists and Manufacturers of Manchester," responded to by William Amory, Esq., "Distinguished for their intelligence, ability and skill, their success and the prosperity of Manchester, are cast in the same mould, forged in the same fire, and worked by the same gears, and must be run together at equal, and I hope, uninterrupted and full speed forever."

"The Mechanics and Manufacturers in the employment of the Amoskeag Manufacturing Company," with response from Robert Read, Esq.: "May their prosperity through life be as propitious as the result of their combined skill and industry has been successful, to the establishment with which they are connected."

William A. Burke, president of the evening and master mechanic, responded to the toast, "Machine Building and

Manufacturing—Children of the same parent—Domestic Industry. May all of us who are engaged in either calling continue as well united as we are this evening, while spindles are used or cotton grows."

Among the regular toasts offered the following came early in the program, and we regret that the name of the author of the verses that have not become immortal, but which served their purpose that evening, is not given in the report of the festive occasion:

"A *Reed* we have that's good and true,
Keeps filling and warping always in view,
The motion's done both quick and right,
Brings out the cloth both *striped* and *white*.

"In the market we'll have a share,
For with our *Sayles* can none compare."

Machinists and Manufacturers of Manchester.—"May health, wealth, prosperity and mutual friendship ever be theirs.

"May the principles of temperance be implanted in the bosom of every Mechanic and Manufacturer of Manchester."

Toasts were offered to *Honor, influence and long life to the public spirited patrons of Manchester*.

Our Painter.—Though a *Child*, yet by his superior skill has proved himself a man.

The Stark and Amoskeag New Mills.—*Rivals* but not enemies.

A dozen other regular and voluntary toasts were offered and responded to by various persons present with great felicity, while among the songs sung was the following composed for the occasion and sung by Mr. J. C. Horr of Meredith Bridge.

AMOSKEAG'S NEW MILL.

Tune—The Poachers

Hurrah ! hurrah ! the work is done ;
We've met here with good will,
To eat, to toast, to celebrate
The Amoskeag New Mill.
The old, the young, the rich, the poor,
A common lot to all,
Have met here to participate
The sin by "Adam's fall."

Among the woods and sandy plains,
Where once the savage trod,
Schools and Academies appear,
And houses of our God.
The village spires, the town house bell,
Will tell the stranger here,
As enterprising citizens,
We hold our rights most dear.

Along her banks a noble stream
Rolls downward to the tide,
When pressing onward to its home
Transporting boats do glide.
Her 'draulic pow'r moves every wheel,
Subjected to the will,
Where many a laborer finds employ,
In Amoskeag's New Mill.

The mighty cars will roll along
Beside the great canal,
Where on one side the factories stand—
The other side we dwell.
We'll step into her lofty train—
To Boston city go—
Can dine and do our business up
And back before you know.

Her noble shop where Master Burke
 Hath planned and built the means
 For manufacturing India goods
 Of cotton from New Orleans ;
 Her crew the noblest of our sons
 Have rendered him their aid—
 By industry and prudent means
 Have found themselves well paid.

Other toasts included "Our host—He is a good shepherd for he provideth well for his flock." Ezekiel Blake, later overseer of No. 3.

"The Amoskeag Old Mills, like a good watch, known by the uniformity of its ticking." Responded to by William G. Means.

January 24, 1842 the Company originated the first banking system in the town, when it arranged to receive the funds of its employees as far as they wished. This was not a speculative idea, but done for the accommodation of those who desired some safe place of deposit for their surplus earnings. This plan was continued until 1856, and then abolished as regular banks had been organized, and in the general overhauling of the methods of the company it was not thought advisable to carry any longer a responsibility that was not profitable. Accordingly the money on hand was paid back to the depositors as fast as it was called for, though it was nearly or quite twelve years before the final dollar was returned to the owner. The amount on deposit at this time was, in round numbers, \$175,000.00 on which was paid six per cent interest.

The need of a shop where they could do their own repairing, as well as make new machinery, had been apparent from the first. It will be remembered that both the Bell and

Island mills had been originally intended for such purposes, and when they had been converted into cotton factories a small machine shop had been built, which was burned in 1848. Thus, in 1840, simultaneously with the building of their first mill on the east side, the Company erected a machine shop for new work and repairing. This building, which was 260 feet in length, 36 in width, and three stories in height was located upon a section of the lower canal and a continuation of the famous Blodget canal. The river at that time made a bend in towards the east bank and the west wall of this shop was built out over the river as it then flowed.

This natural bend in the river, beginning near where the Blodget house stood, which is now the site of the North Power station, somewhat interfered with the project of building along the east bank, so it was thought advisable to straighten the stream by cutting for a considerable distance a new channel. This must be done by filling the original course of the river and cutting away the meadow land belonging to the McGregor Farm, so called, on the west side, which Dr. Dean had occupied during his stay in Amoskeag. Considerable of the filling used at first was obtained from the lot east of the canal and north of Pennacook Street where there was a hillock, which was near the site of the first school house in Manchester, builded by subscription headed by Judge Blodget and the Starks. This undertaking had not been completed before a freshet washed away nearly all of the filling, so the work had to be resumed as if nothing had been done. The material this time was brought over from the intervale land on the west side already mentioned. The water in the old channel was deep in many places, having a depth of forty feet at the elbow of the curve, so the alteration was an expensive undertaking.

but it not only improved the building situation, but it added greatly to the building acreage on the east bank. The No. 9 mill, as it was called, stands over the original course of the river.

William A. Burke was made superintendent of the machine shop. Orders for machinery came in very rapidly, and the need of a foundry became apparent, as it was necessary to send to Chelmsford, Mass., for the castings. So in 1842 the Company built a foundry north of the Machine Shop. This last building was considered an extravagant structure at the time, but within four years it was insufficient to meet the demands. In 1848 what was known as the "New Foundry" was built, 120 feet by 80 feet, one story in height. This was somewhat larger than the original building, and was constructed along lines of improvement. Work in this building was discontinued in 1883, when a new foundry was built on the west side.

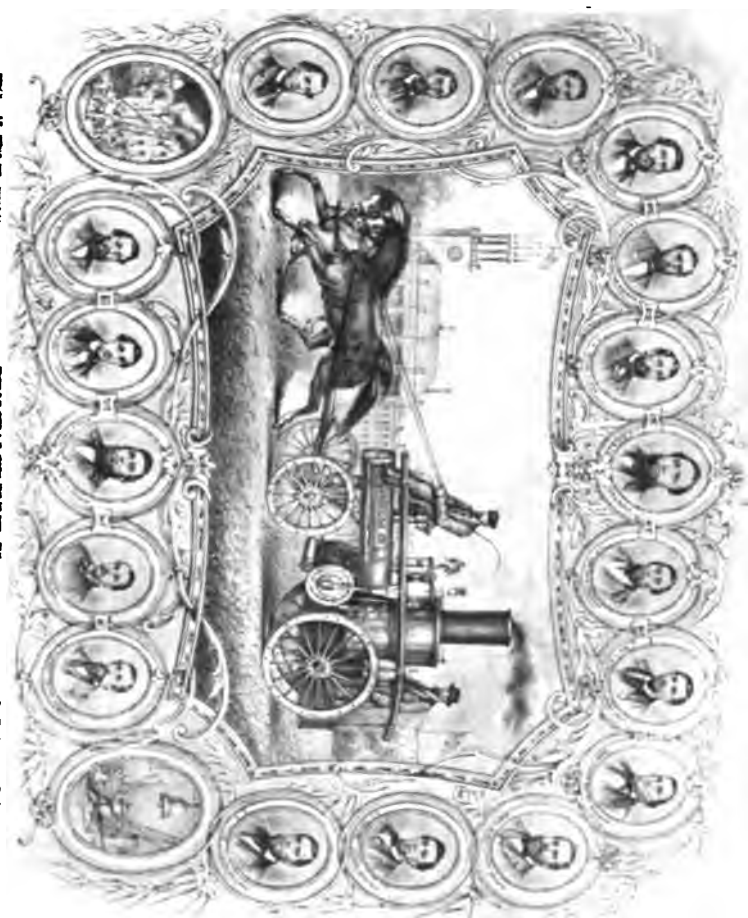
In 1848 a new machine shop was also built, 260 feet in length, 40 feet in width, and three stories in height. This was constructed on piles driven in the newly made land. During this period each mill had its own repair department. This same year of important improvements, the Company built a saw and grist mill on the east bank of the river opposite "Fishing Island." This mill was in operation for several years.

Scarcely was the New Foundry built and equipped than an order came from the Northern Railroad for a locomotive, and work was immediately begun upon this engine, which was completed so that it was sent out of the yard at 2 o'clock, P. M., March 1, 1849. This locomotive was named the Etna, and I believe it was the first one made for that road. Other orders overlapped each other, and the second locomotive was named the General Stark, and was sent out of the yard

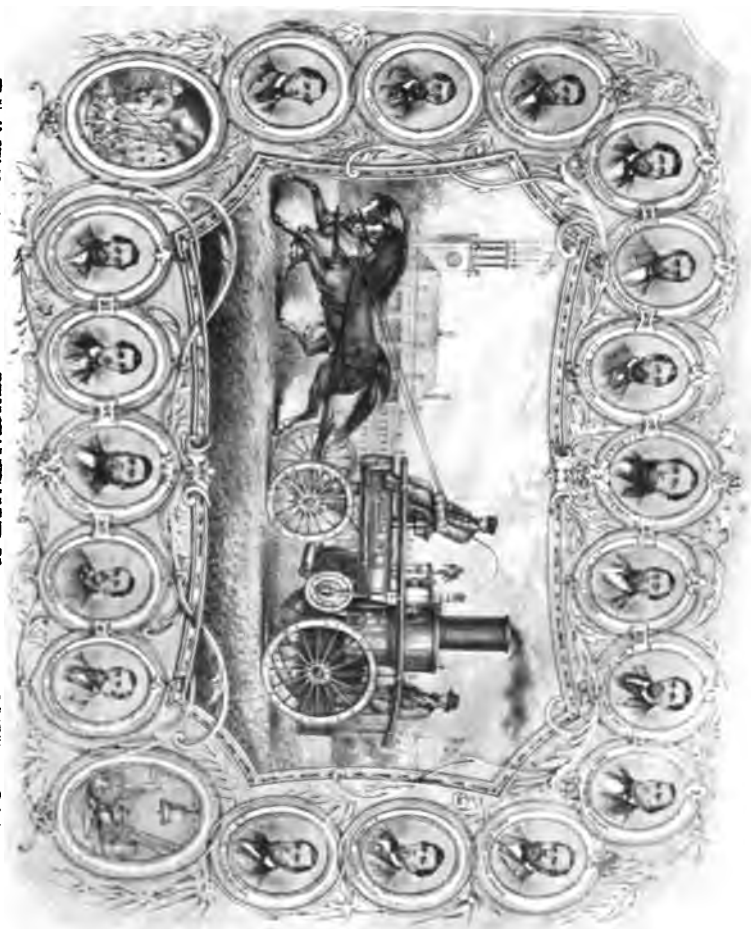
at 5 o'clock, P. M., June 27, 1849. A third engine, the Washington, was sent off November 7, of the same year. Thus in the early stage of locomotive building, the Company won a high place in that line of work, the orders coming in so rapidly that in 1856 as many as sixty were built. Aretas Blood was at that time superintendent of the machine shops, and Cyrus W. Baldwin was agent. In 1859, after having made 232 locomotives, the Company sold out the interest in this work to the Manchester Locomotive Works, of which Mr. Aretas Blood and Oliver W. Bayley were the leading spirits.

That was a trying period in manufactures and industries of all kinds. The country was suffering everywhere from the bitter differences that had arisen between the people of the South and North. Affairs were depressed and business at a standstill. Unable to get cotton the mills were forced to shut down to a great extent. Hence the management felt the necessity of keeping the machine shops running as far as possible. In the prosperous days the "apprentice system" of the old country had been followed, except that where seven years had been required across the ocean, three years came into vogue here. The young man wishing to follow the vocation bound himself to work for that term. The first year he received fifty cents a day; the second year, sixty-six and two-thirds cents a day; the third year, eighty-three and one-third cents a day. This course completed he was certain of a steady position at good pay.

The same year in which the Company closed out their manufacture of locomotives, Nehemiah S. Bean, one of their workmen had been working out a new design of his for a steam fire engine. This was in reality an improvement upon one he had been instrumental in having built in Lawrence, which was



1849. A third engine, the number 7, of the same year. In the same building, the Company built the orders coming in so that many were built. Aretas was one of the machine shops, and in 1857, after having sold out the interest in the Works, of which Mr. [Name] were the leading spirits. The structures and industries were everywhere from the [Name] between the people of the [Name] and business at a [Name] the mills were forced to shut [Name] the management felt the [Name] was running as far as [Name] the "apprentice system" of [Name] except that where seven [Name] the ocean, three years came [Name] wishing to follow the [Name] for that term. The first year [Name] the second year, sixty-six and [Name] the third year eighty-three and one- [Name] completed he was certain of [Name] [Name] the Company closed out their [Name] Nathaniel S. Bean, one of their [Name] a new design of his for a steam [Name] an improvement upon one he [Name] built in Lawrence, which was



the first to be constructed and put into service in New England. He was now so far advanced in his plans that the city of Manchester was induced to give the Amoskeag Manufacturing Company an order for one of these machines. This was made in season for the Company to exhibit it at the firemen's muster in 1859. The pattern of this engine immediately finding favor, orders began to come in from all sections, until the Company was obliged to increase its force in the machine shops. It was not long before they were able to build and deliver an engine within two months of receiving the order. Every engine sent out was warranted to be of the best material and workmanship, and a competent engineer was sent to put the machine in complete running order. While they were prepared to fill orders for various styles, the greatest calls were for their particular make of single and double harp tank engines. The first class of the new style was an engine that weighed without fuel or water, about 5,700 pounds; about six thousand pounds ready for service. The second class of this style of engine fully equipped with fuel and water, weighed about 5,300 pounds. The first named was arranged to be drawn with horses, while the other was fitted to be drawn either by horses or men. The single harp tank engine was still lighter, weighing with its supplies, a little over 4,000 pounds.

The first class of these engines was often put to severe tests at firemen's musters and parades, and won many prizes, and became a general favorite. From the initial date of the manufacture of this kind of machinery in 1859 to the close in 1876, 550 steam fire engines were built, and these were not only sent to many of the largest cities of the United States, but to others in all parts of the world, among which may be

mentioned: Amoor, Russia; Arequipa, Chile, S. A., 2; London, Eng., 2; London, Province of Ontario, 2; Lima, Peru, S. A.; Sidney, New South Wales; Shanghai, China; Yokahama, Japan; and many other distant places.

The record of the manufacture of steam fire engines was as follows: in 1859, five; 1860, twenty; 1861, eighteen; 1862, seventeen; 1863, twenty; 1864, twenty-four; 1865, forty-eight; 1866, fifty-seven; 1867, fifty-nine; 1868, thirty-three; 1869, twenty-five; 1870, twenty-three; 1871, twenty-nine; 1872, thirty-one; 1873, fifty-eight; 1874-5, thirty-seven. The whole number made was 504. The greatest number made in any one year was fifty-nine in 1867. This year the first horseless carriage was made under the supervision of N. S. Bean, who was superintendent of the shop during the entire period. This engine of a ten-thousand pound model, became the pattern which did much toward making the engines of the Company such a success. One of their engines of this style was sent to Boston during the great fire in 1872, and did most excellent work. In fact it is claimed that the fire was kept from crossing Washington Street largely through the efficient work of this machine.

In 1876 the Company closed out this branch of their industry to the Locomotive Works, which had previously taken the manufacture of steam locomotives. Agent Straw claimed that directly there was not much money in the manufacture of these steam fire engines, but it proved a great advertising medium for the Company. The popularity of those engines, as the list of sales proves, was world-wide.

The recovery from the panic of the late '50s was slow and uncertain, with positive evidence of civil war approaching. Most of the cotton mills were obliged to shut down and

discharge their help. An instance of this kind occurred in Lowell, and when the war was over it was like starting new, with inexperienced help and few orders. Through its machine shops the Amoskeag Manufacturing Company avoided this break in its onward course. The older men at work in the cotton mills, who were disqualified for going to the front, even had they wished to, were taken into these shops, and no sooner had the war broken out than the Company had an order for a lot of Springfield rifled muskets. These guns were first-class 45 calibre firearms, and every part was made in the shops here. Complete sets of rolls for making the barrels, stocking machines, bayonet machinery—in fact, everything needed in manufacturing these weapons was made here. About 300 men were employed and 125 guns turned out in a day. Six government inspectors were present to inspect the guns at the close of every day. Before the conflict was over 25,000 of these guns had been made. One of the hammers used, in the days of gun manufacture, to straighten the barrels, is still to be seen in the shops where it is put to other uses daily. There was also a contract to make 17,000 breech loading carbines. The workmen on these were Germans who understood the mechanical making of these weapons. The war closed before this contract was finished, and the guns were sold across the water.

A breech-loading cannon was cast in the foundry for a German inventor named Linder. From 1863 to 1866, the new McKay sewing machine, which could sew a shoe in a few seconds, became very popular, and the Company made between five and six hundred of these machines for the parties putting them on the market.

During the early stages of the manufacture of firearms

here the shops presented a very warlike appearance. Following the famous "Draft Riots" in New York, in 1863, it was rumored that an attempt was planned to seize the guns being made at the Amoskeag Company's shops. Feeling that it was safest to be prepared, Agent Straw ordered a brass field piece to be mounted at the gate just west of the lower canal and in line with Stark Street. The gun was manned by a squad of the First New Hampshire Battery, and a guard was stationed about the mill yard. Men who were engaged in work upon implements of warfare were exempted from service at the front, so the boys who remained here did their share of the fighting in fitting others with the necessary accoutrements.

On the Fourth of July, 1861, the boys in the shops decided that it would be proper for them to show the evidence of their patriotism by displaying a flag. Accordingly they "chipped in" and bought the banner. A tree of suitable size was obtained and smoothed so as to make the staff. Then this was raised and fastened to the south wall of the old shop. There was a great deal of honest pride in this effort, and it was deemed fitting that the top should be ornamented with the design of a cannon, which was made in the shop from a pine log. The raising of the flag was a patriotic occasion, when an elaborate program was carried out. The famous Dignam's band played, and noted speakers delivered eloquent addresses suitable to the day and deed.

When the industry of the Machine Shop began it stood at the extreme lower end of the clearing made along the east bank, as the building of mills had continued. The alders grew close to the foundation of the south walls, while down the river as far as could be seen a straggling growth of willows, alders, and other bushes grew to the water's edge, their



OLD AMOSKEAG FOUNDRY

drooping branches often dipping into the stream. The repair shop, which was distinct from the Machine Shop, stood on the north side of the present Middle Street gate. The office was on the south side, and the dye house occupied the space which is now under the stairway leading to the counting room.

The "new foundry" was fitted up with some of the largest furnaces in the country at that time, one of them having a capacity of twelve tons. There still exists in the present old shop a giant lathe used in those days. This measures twenty-one feet in diameter, and was said to be the largest in the country. The McKay works of Boston, that had contracts for building iron clads of the monitor type, sent to the Amoskeag Company to turn out the big brass rings of the gun turrets, as they could not get this work done elsewhere. The old engine lathe is still in occasional use and forms an interesting link between the present and the days when the country was shaken with civil war, and peaceful industry gave way to pursuits leading to conflict.

The first machinery built by the Company for its own use began in 1862, and the following is believed to be a correct record: spinning frames, 1862; pickers, 1865; railway heads, 1865; drawing frames, 1865; slubbers, 1865; intermediates, 1865; speeders, 1865; cards, 1867; spoolers, 1880; warpers, 1880; quillers, 1881; slashers, 1882; looms, 1885; built a spinning frame, 1901.

In 1880 there was developed and built under the direction of James D. Butler a four, five and six box loom known as the Amoskeag Segment and several thousands have been built and are still running.

Altogether the machine shops offer an interesting history. The agent at the beginning was William A. Burke, who was

succeeded in 1847 by Oliver W. Bayley, who left to enter the Manchester Locomotive Works with Aretas Blood, in 1855. From that year Cyrus W. Baldwin was agent, and retained the office until the annual meeting in July, 1858. Then the entire executive management was given to one man, including the operation of the mills, the machine shops and the real estate and water power. The new leader was Ezekiel A. Straw, who had been chosen agent of the mills in 1856.

Among the many workmen who were identified with the works of the machine shops during those eventful years were several who have since gained prominence in other vocations. John Rodgers began his work as a sculptor while connected with the office of the machine shops, getting his clay for his first statues from the foundry, and making his models during the leisure hours he could catch from his duties in the office.

CHAPTER VII

ASSOCIATE INDUSTRIES

WHILE the facilities for manufacturing de laines at Hooksett were not equal to the requirements, it was shown that this kind of fabrics could be made with profit under proper conditions. To meet these requirements, and to install machinery suitable for manufacturing de laine goods entirely within its own plant, the Manchester Mills corporation was chartered in 1839, with a capital stock limited at \$1,000,000. Several of the grantees were among the leading stock-holders of the Amoskeag Manufacturing Company. No definite action seems to have been taken for about five years, when, in 1844, land for the site of a mill was bought of the Amoskeag Company. Ezekiel A. Straw, who was prominent among the new incorporators, was sent to Europe to ascertain all that he could relative to the manufacture of de laines. His report was so favorable that the following year the Amoskeag Manufacturing Company was engaged to build a mill of the first class for them. This was completed in 1846, and was 240 feet in length, 60 feet in width, and four stories in height. When equipped it contained 30,000 spindles and 708 looms. In the meantime the original plans had changed somewhat, so a new charter was taken out in 1847, under the style of the Merrimack Mills, with a capital stock of \$1,500,000. This corporation purchased the rights and title of the former, which

ceased to exist. In July, 1849, the name was again changed, now to Manchester Print Works, which title was retained for a long period of years. In 1852, the capital stock was increased to \$1,800,000.

In 1846 the Amoskeag Company had built for them on the canal below the de laine mill, a printing establishment 300 feet in length, 60 feet in width and six stories in height. This building faced on Granite Street. In 1850 another large mill, 320 feet in length, 60 feet in width and five stories in height with basement and attic was constructed, also on the lower canal, near Granite Street. This mill had 20,000 spindles and 600 looms. The same year an L to the lower mill was built. The Company also built for this corporation 94 tenements and boarding houses. The L was designed for the engraving department, and contained chemicals and dyestuffs.

These mills were soon employing 300 males and 300 females, while the annual pay-roll was \$220,000. The annual amount of cloth manufactured was 14,000,000 yards of de laines and prints, or an average of nearly 45,000 yards daily.

The manufacture of de laine goods was transferred from the Hooksett mills in 1846, to the Manchester Mills, and the former were henceforth devoted to the making of cotton fabrics with success. In 1865 the Amoskeag Manufacturing Company sold the Hooksett mills to a new corporation organized for the purpose of making cotton goods.

The first agent of the Manchester Print Works was an Englishman named James Peacock, who retired in 1848. He was succeeded by William P. Newell, agent of the de laine mills. In 1852 John P. Lord was appointed superintendent of the printing department. He was followed in 1854 by

Charles H. Dalton, and the same year Waterman Smith was chosen agent.

On the morning of September 22, 1852, a fire was discovered in the dry room of the main building of the Print Works, and in less than an hour the building was a mass of smoking ruins, so rapidly did the flames devour the highly seasoned timbers. By earnest and persistent endeavor the counting room, engraving and store section, together with the dye house and boiler house were saved. The loss was about \$125,000, covered by insurance. July 15, 1855, a more disastrous fire damaged the largest mill to the amount of \$271,353.00. This was well insured. Both these mills were rebuilt upon improved plans.

This plant had a most checkered history, marked at periods by excellent management and high dividends; at others with erratic success and final failure. For a considerable period a large profit was realized on the manufacture of de laines and kindred goods, so there were dividends that awoke the vanity of the stockholders. Then at the close of the war, these kinds of goods went out of the market, leaving a large surplus on the manufacturers' hands. This was not disposed of to advantage, and on March 24, 1874, the property was sold at auction. The new proprietors were styled The Manchester Print Works & Mills, with a capital of \$2,000,000. This title was changed the same year to Manchester Mills.

Such men as Oliver Dean, David Sears and William Mixer served as presidents of the old Company, while Nathan Appleton, George Howe, Oliver Dean, William Amory, T. Jefferson Coolidge and Nathan Parker were among the directors. The new corporation met with varying success. The line of manufacture carried on by these mills found a

fluctuating market. There were intervals of prosperity and intervals of adversity. Then the climax came, upon the building of a new and larger structure for printing and finishing out of an anticipated surplus which never materialized. This building, which has 498,740 square feet of floor space, at the time was said to be the largest building of its kind in the world. It proved an elephant on the hands of its builders, until finally its stockholders turned to the Amoskeag Manufacturing Company to effect if possible an arrangement whereby the business might be continued without a loss. The management of the Amory Mills also proposed that the Amoskeag Company take a lease of that plant for a long term.

Both propositions were looked upon with favor by the directors of the latter company, but finding a lease could not be accomplished without surmounting difficulties, it was voted unanimously to purchase outright both concerns. Accordingly a special meeting of the stockholders was called for December 12, 1905, when it was voted to accept and adopt the following terms of purchase:

To assume all the outstanding obligations and to buy the entire property and assets of the Amory Manufacturing Company and pay therefor the sum of one million five hundred and seventy-five thousand dollars (\$1,575,000) amounting to one hundred and seventy-five dollars (\$175) for each share of Amory Manufacturing Company stock now outstanding, payable in cash to Stockholders in the proportion to their respective holdings upon the delivery of their shares to this Company, such payment to be made on the 15th day of February, 1906, provided the entire property and assets of the Amory Manufacturing Company shall have been transformed and delivered to this Company on or before January 15, 1906.

If any stockholders of the Amory Manufacturing Company at the time of such delivery of his shares and the

payment in cash by this Company of one hundred and seventy-five dollars (\$175) for each thereof, shall desire to continue his interest in the business, he shall then and not later have the right to invest in the stock of this Company to such amount as he may desire, but in no case to an amount exceeding six-sevenths (6-7) of the money paid him for his Amory shares, in the manner and upon the terms following:

This Company will sell to such stockholders at the time and to the extent aforesaid and not otherwise, a share or shares of its capital stock of the par value of One Hundred Dollars, (\$100) at the price of Two Hundred Dollars (\$200) per share. Said shares shall be delivered on the first day of June or December next following the enactment of legislation authorizing the issue of such stock, which legislation is to be procured by this Company as soon as practicable. The rights to such shares shall be evidenced by certificates for a share or shares or fractions of shares which, until the delivery of the stock purchased shall entitle the holder thereof, on each day when payments are made to the Stockholders of this Company, either in money or stock, and whether by way of dividend or otherwise, to the same payments as if the certificate had been converted into stock, except that no payment will be made on account of fractional certificates which, in order to participate in such payments must have been presented at the office of the Old Colony Trust Company in amounts calling for at least one share of this Company's stock and have been exchanged for a certificate entitling the holder to one or more shares.

* * *

If it shall be found impracticable to make the par value of the Amoskeag Manufacturing Company shares One Hundred Dollars (\$100) the purchase and sale of the above contemplated will be carried out on the basis of the present par value, One Thousand Dollars (\$1,000.)

(2) Voted, That the Stockholders hereby approve and consent to the purchase by this Company of all the property and franchises of the Manchester Mills upon the terms and

conditions set forth in a vote of the Directors of this Company passed November 27th, last, which vote has been read to this meeting, and a copy of which is annexed to this vote as part thereof; that the Directors are authorized to complete the purchase and carry out the terms thereof by assuming and paying the debts of said Manchester Mills, by receiving from it a conveyance of all the property and franchise, by paying to its Stockholders their several proportions of the purchase price and receiving transfers of their shares, and by issuing rights to shares of this Company's stock which, at the price named, may be sold to Stockholders of the Manchester Mills; and that all such rights so authorized to be issued and not sold to such Stockholders may be disposed of by the Directors of this Company at their discretion.

Director's Vote, passed November 27, 1905.

Voted, Subject to the approval of the Stockholders at a special meeting to be called for the purpose, to assume all the outstanding obligations and to buy the entire property and assets of the Manchester Mills and pay therefor the sum of three million five hundred thousand dollars (\$3,500,000) amounting to one hundred and forty dollars (\$140) for each share of Manchester Mills stock now outstanding, payable in cash to the stockholders in the proportion of their respective holdings upon the delivery of their shares to this Company, such payment to be made on the 15th day of February, 1906, provided the entire property and assets of the Manchester Mills shall have been transferred and be delivered to this Company on or before January 15th, 1906.

If any Stockholder of the Manchester Mills, at the time of such delivery of his share and the payment in cash by this Company of one hundred and forty dollars (\$140) for each thereof, shall desire to continue his interest in the business, he shall then and not later have the right to invest in the stock of this Company to such amount as he may desire, but in no case to an amount exceeding five-sevenths (5-7) of the money paid him for his Manchester [Mills] shares, in the manner and upon the terms following:

This Company will sell to such Stockholders at the time and to the extent aforesaid, and not otherwise, a share or shares of its capital stock of the par value of One Hundred Dollars (\$100) at the price of Two Hundred Dollars (\$200) per share. Said shares shall be deliverable on the first day of June or December next following the enactment of legislation authorizing the issue of such stock, which legislation is to be procured by this Company as soon as practicable.

RESULT OF VOTE

Amory Mills

Whole number of votes	2,982
Affirmative	2,980
Negative	2

Manchester Mills

Whole number of votes	2,967
Affirmative	2,957
Negative	10

This far-reaching transaction placed in the possession of the Amoskeag Manufacturing Company all the cotton manufacturing plants of Manchester, with the exception of the Stark Mills.

At this meeting it was voted to change the par value of shares in the Amoskeag Manufacturing Company from one thousand dollars to one hundred, ten shares of the latter to equal one of the former issue.

The Amory mill was built on land bought of the Amoskeag Manufacturing Company in 1880. It is five hundred and twenty feet in length, ninety-four feet in width, and four stories in height in the centre front, but five stories at the rear and ends. Two towers in front at equal distances from the extremes complete the symmetrical appearance of the building. It was named in honor of William Amory, one of the pioneers in cotton manufacturing in New England. The capital stock

was \$900,000, and the first board of officers consisted of William Amory, Daniel Clark, John L. Bremer, T. Jefferson Coolidge, Channing Clapp, George A. Gardner and Frank J. Amory, directors; Lucius M. Sargent, treasurer; Thomas L. Livermore, clerk; George P. Whitman, agent.

The initial movement towards establishing a new organization for the purpose of manufacturing under the name of the Langdon Mills was taken in 1846, and nothing coming of this movement, in 1853 the matter was again taken up, but it was not until 1860 that the corporation became a live institution. Daniel Clark, John S. Kidder, Jacob G. Cilley and Adam Chandler were the grantees, and the capital stock was fixed at \$200,000. The Blodget Paper Company, which was chartered in 1853, for the purpose of manufacturing wall paper, built the first mill for this company where No. 1 Langdon Mill now stands. The power was obtained from the upper canal of the Amoskeag Manufacturing Company. In 1874, owing to the failure of the paper company, which manufactured the first paper hangings in this country, this plant was sold at auction to Gardner Brewer Company, that were heavy owners in the business. This company soon after sold the corporation to the Amoskeag Manufacturing Company, which in turn transferred it to the re-established firm, Langdon Mills, to be eventually absorbed by the Amory Manufacturing Company. Most of the officers concerned in the management of the new concern were connected with the larger company. In 1874, E. A. Straw was chosen one of the directors. William Amory became president to succeed Gardner Brewer. The capital was increased from time to time, until the shares were \$1,000 each, and sold considerably above par value. This fact required no other proof to show that the company was

very successful. The particular class of goods which gave these mills their reputation was the "Langdon G B" sheetings.

A corporation styled the "Amoskeag Duck and Bag Mill" was organized in 1856, for the purpose of manufacturing cotton duck and bags. This was the year that Mr. Straw became agent of the Amoskeag Manufacturing Company, and he was one of the prime movers in this new enterprise, being a stockholder and chosen treasurer. Eight years later, in 1864, he was also made president, and soon after he secured the entire interest in the mill, the name of which in 1866 was changed to Namaske Mill. Already the object of the mills had been undergoing a change, and now the machinery for making duck and bags was supplanted by that for the manufacture of gingham and wool flannels. In 1875, Namaske Mill was bought by the Amoskeag Manufacturing Company, with the exception of the machinery for making woolen goods, which was purchased by out of town parties, and the mill was operated by the Company until 1888, when it was sold to A. P. Olzendam for a hosiery mill. Upon the failure of this company March 15, 1905, it again became the property of the Amoskeag Company. Besides its connections with these larger corporations the Amoskeag Company was more or less interested in many minor industries carried on in buildings it had erected and moved by power it had leased. In 1850, "Mechanics' Mills," a series of long wooden buildings, with brick partitions, were built near the northern limit of the lower canal. These picturesque hives of industry in time became better known as "Mechanics' Row." Antedating this irregular row of structures was a brick building fitted up for a grist mill, driven by an old-fashioned "breast wheel." In time Messrs. H. & H. R. Pettee controlled this

mill, while the miller was Elijah Cotton, of Chester. Western corn for stable use was ground and wheat was ground and bolted for the farmers who brought their grists here. Older than the grist mill was a large sawmill, with its up and down saws, and which stood farther up the river. The foreman of this mill and lumber yard in 1860 was Jonas Page.

The pioneer manufacturer at Mechanics' Mills was Benjamin S. Stokes, who began the manufacture of files in 1851. His output was sixty dozen a week for several years, and he employed on an average fourteen men. Next to Mr. Stokes, Thomas R. Hubbard did wood planing and manufactured sashes and blinds for builders. Later this firm became Piper & Reynolds and it turned out annually 75,000 handles, of all kinds, besides making 35,000 wheel spokes yearly as late as 1875. In 1852 John Cleworth began making reeds in the next section on the second floor, while A. D. Burgess made power loom pickers on the lower floor. He was succeeded by Samuel D. Lord, who also made pickers. Charles Leighton, the manufacturer of axes and hatchets, came next, and then, in 1858, Benjamin H. Chase began to manufacture power loom pickers, turning out annually 15,000 pickers and as many running feet of leather belting. J. M. & S. F. Stanton, machinists, occupied the adjoining shop. They sold out to Hiram Forsaith.

The next building was three stories, of brick. The lower or basement floor was the Amoskeag pump house, from whence water was pumped to the reservoir on Oak Street. The second floor was occupied by J. W. Whittier, who made leather belting. The third floor was occupied by J. S. Yeaton, who manufactured loom harnesses. Upon his decease his wife continued the business awhile, until it was bought by



MECHANIC'S ROW

mill, while the miller was Elijah Cotton, of Chester. Western millstones were used, and wheat was ground and bolted. A few farmers who brought their grists here. Older than the grist mill was a large sawmill, with its up and down saws, which stood farther up the river. The foreman of this mill as a lumber yard in 1860 was Jonas Page.

The pioneer manufacturer at Mechanics' Mills was Benjamin S. Stokes, who began the manufacture of files in 1830. The output was sixty dozen a week for several years, and he employed on an average fourteen men. Next to Mr. Stokes, Thomas R. Hubbard did wood planing and manufacturing sashes and blinds for builders. Later this firm became Hubert & Hubbard and it turned out annually 75,000 handles, 40,000 shingles, besides making 35,000 wheel spokes yearly as late as 1875. In 1852 John Cleworth began making reeds in the rear section on the second floor, while A. D. Burgess made power loom pickers on the lower floor. He was succeeded by Samuel D. Lord, who also made pickers. Charles Leighton, the manufacturer of axes and hatchets, came next, and then in 1858, Benjamin H. Chase began to manufacture power loom pickers, turning out annually 15,000 pickers and 20,000 feet of leather belting. J. M. & S. F. Stanley, who lived in the adjoining shop. They sold out in 1875.

The mill building was three stories, of brick. The lower story was connected with the Amoskeag pump house, from whence water was pumped to the reservoir on Oak Street. The second story was occupied by J. W. Whittier, who made power loom pickers. The third floor was occupied by J. S. Yeaton, who manufactured loom harnesses. Upon his decease his wife continued the business awhile, until it was bought by



MECHANICS ROW

John W. Mears, who conducted the same industry. In the next building, J. A. V. Smith and his brother, David F., made flyers for several years. On the second floor James A. Bradley, who had previously been in the pumping building, opened a shop for making covering for rolls, and he was succeeded in 1870 by his son, Charles B. Bradley. On the third floor in later years, Silas A. Felton & Co. made brushes.

In 1857 The Manchester Machine Card Factory made machine card clothing, keeping twenty machines in operation. Two years later James Baldwin & Company began the manufacture of bobbins, employing over fifty men, and making on an average 200,000 bobbins a month, besides shuttles and wooden ware to a considerable extent. Jeremiah Hodge afterwards occupied this place, making window sashes, blinds and house finish. The first floor of the next building, was the repair shop of the Land and Water Power Company, under the charge of Charles Brown. The top floor was occupied by Bisco & Denny, who made card clothing for power cards. About 1858, Charles W. Horr began to manufacture stair rails, bannisters, etc., on the first floor of a wooden building that stood immediately north of the grist mill. He was succeeded in 1860 by W. W. Hubbard, who increased the scope and volume of the work, and later moved to the quarters once occupied by Thomas R. Hubbard. On the second floor, J. B. McCrillis carried on the manufacture of carriage wheels in connection with his business on Jane Street, besides doing custom work. A hosiery was started in Mechanics' Row by John Brugger & Son, who made 80,000 pairs of hose annually and employed 150 persons in the shops, besides many others working outside. A hosiery mill of three stories and 100 by 30 feet was occupied by A. P. Olzendam in 1875, and two

years later the Amoskeag Company built an addition of 100 by 42 feet and three stories with a basement for him. He made 80,000 pairs of stockings a year.

These were but a portion of the industries that existed from time to time, for long or short periods, as the case might be. But finally Mechanics' Row, with its many busy corners, had to give way to another, and in 1886 the Jefferson Mill was built upon its site.

In connection with the operations of the Company, were several enterprises, or contemplated enterprises, that may or may not deserve mention. Among these was the formation of the Manchester Bleachery by men prominently associated with the Company. This was chartered in 1863, and again three years later, but failed to obtain sufficient capital to materialize. Among other undertakings was the incorporation of the Merrimack Water Power Company in 1857, with the intention of securing the property of the Amoskeag Manufacturing Company. It is, perhaps, needless to say that this scheme failed.

CHAPTER VIII

THE MILLS IN THE MAKING

SO far we have hastily sketched, from a historical viewpoint, the unbroken growth of the great enterprise founded by the half-dozen sanguine projectors, who held their first meeting in the dingy counting room of the Old Bell Mill on the evening of July 13, 1831. We have come to realize something of the magnitude of their plans, the fulfillment of their dreams, their mantles falling on worthy successors. Still prodigal indeed must be the imagination which can fully and comprehensively picture to the mind's eye the vast and intricate operations of this large manufacturing concern.

Its works and mills stretch along the east bank of the Merrimack for nearly two miles, and spanning the river by its own bridges, other factories already occupy the slopes on the west bank. From the present indications it is evident that the day is not far distant when the Company will again occupy the site of the old wooden mill that laid so well the foundation for this great industry less than a hundred years ago. When this shall have been done, and the mighty loop from the Falls back to the Falls again shall have been completed, there will be scarcely less than four miles of brick buildings in tiers of two and three deep.

Confining ourselves to the present situation, we find that the tenement blocks, dwelling and boarding houses occupy a large part of the district between Brook Street on the north,

Elm back street on the east, Granite Street on the south and Canal Street on the west. Besides these buildings nearly all of brick and substantially built, the Company owns on the west side of the river, several tenements in Amoskeag Village, and on McGregor and Douglas Streets. The aggregate extent of land occupied by tenements is not less than thirty-five and one-half acres. It still has for its own use, or for the benefit of the city, 1,413.49 acres.

The Company came into possession on the west side of the river of about 1,448 acres. The principal deeds were given by the successors of Olney Robinson, covering the Judge Blodget farm on Black Brook. Later most of this farm passed into the possession of Israel Dow, and to-day is owned by his son, Perry H. Dow, the present Country Club occupying by lease a part of this homestead of the builder of Amoskeag Canal. David Sears deeded Lot No. 51, 161 acres, that he had obtained from Theodore Atkinson, and Lot No. 53, from one Caleb Dutton, consisting of 169 acres. Both of these lots had belonged to the Masonian Proprietors, and together they cost the Company \$1,830.50. The largest single acquisition was the Robert McGregor farm, which deed called for eleven hundred acres, and extended along the west bank of the river from Merrill's Ferry, just above the present Granite Street bridge to the Falls. Israel Trask had purchased this farm of Mr. McGregor, May 22, 1811, for \$8,000. February 16, 1828, Mr. Trask deeded this place to Samuel Slater and his associates for \$18,000.

The islands in the river below the falls, Fishing Island excepted, were deeded, April 26, 1782, by a grant of William Whipple and others, appointed as a committee, to Robert McGregor for twenty-four pounds lawful money, and were of

course a part of the McGregor farm. The land on the west side was principally in Goffstown, but some of it in Bedford, a portion of both towns containing this land, having since been annexed to Manchester. The line between Bedford and Goffstown ran on the southerly side of the back street south of Conant street, and near the Fire King engine house in Piscataquog. Rock Rimmon is in the south-east corner of lot No. 48, on the old Goffstown plan. November 6, 1824, Olney Robinson deeded to Larned Pitcher and his associates five parcels of land, one of eight acres, one of four acres, the saw and grist mills, the old Amoskeag cotton and woolen mill, the unfinished cotton factory afterwards known as the Bell Mill, and land along the river near the Falls. The removal of manufacturing to the east side of the river prostrated the prospects of this section for many years. The Amoskeag Manufacturing Company has 713.29 acres left on the west side.

A contemporary writer in describing the situation here at the time of the removal to the east side says: "A company with a large capital have commenced forming canals and erecting buildings for manufacturing purposes on a very extensive scale. Their plan provides for 37 mills, each containing 6000 spindles. Two canals, two factories, a number of dwelling houses, machine shops, &c., are now nearly completed. The canals are each a mile in length, and will, when completed, be equal to any works of the kind in the country. The village (Amoskeag) is already a place of considerable business, and must eventually become the mart of large manufacturing operations."

The purchases on the east side were greater in number, consisting mainly of farms, and the following list is comprised in the Eddy map made in 1835. Since then what is known

as the "Ledge Lot" has been acquired, and also quite a tract below the gas works.

NAME	DATE	CONSIDERATION	ACRES
Israel Merrill			27.30
Frederick G. Stark	Aug. 28, 1835	\$5,000	16.30
" "	Aug. 28, 1835	6,000	.62
" "	Aug. 28, 1835		9.32
			34.67
	Sept. 17, 1835	500	.52
Robert Hall	Nov. 19, 1835	1,200	26.33
			4.49
George Clark	Aug. 11, 1835	6,000	246.07
	June 16, 1835	1,000	124.52
George Clark		10	3.63
Job Rowell	Nov. 18, 1835	8,000	106.72
	Mar. 31, 1837		26.25
			83.77
Kidder Heins	Mar. 2, 1836	1,000	71.33
			67.05
John Gamble	Nov. 17, 1835	1,500	1.71
	Apr. 1, 1837	6,500	20.22
			13.24
Philip Stevens	Nov. 12, 1835	7,000	35.67
			112.84
			20.00
Henry E. Barrett	Nov. 13, 1835	3,500	42.27
			9.97
Samuel Hall	Nov. 13, 1835	1,200	289.39
Daniel Rowell	Nov. 16, 1835	1,000	11.97
Moses Davis	Nov. 18, 1835	1,500	36.92
John Hall			89.20
Israel Young	Dec. 12, 1837	1,000	33.11
Wilson & Jackson			74.00
Total in acres			1,639.40

The buildings on these various pieces of land were included in the deeds. The Kidder house, formerly the Samuel Blodget house, was situated near the lower canal, at the north end of the new boiler house of the northern division power plant. The Philip Stevens home was nearly on the site



From a Painting by Frank Holland

OLD STARK HOUSE

MANUFACTURING COMPANY

has been acquired, and also quite a tract

DATE	CONSIDERATION	ACRES
		27.30
Aug 24 '08	\$5,000	16.30
Aug 24 '08	1,000	.62
Aug 24 '08		9.32
		34.67
	500	.52
	2,000	26.33
		4.49
	1,000	246.07
	500	124.52
	100	3.63
	15,000	106.72
		26.25
		83.77
	300	71.33
		67.05
	1,500	1.71
	6,500	20.22
		13.24
	7,000	35.67
		112.84
		20.00
	5,500	42.27
		9.97
	1,200	289.39
	1,000	11.97
	1,000	36.92
		89.20
	1,000	33.11
		74.00
Total in acres		1,639.40

various pieces of land were
 Kuller house, formerly the
 located near the lower canal, at
 house of the northern division
 the home was nearly on the site



OLD STARK HOUSE

From a Painting by Frank Holland

of the Derryfield Club house. The John Gamble house was at the north end of Stark Mill yard, close to Bridge Street. The Henry R. Barrett house was south of Granite Street, near the old freight depot. The Young house, afterwards used as a hospital, was south and a little west of the present jail lot on the Nutt road. The George Clark house was close to the east end of Amoskeag Falls bridge, and was the house where Gen. John Stark passed the earlier years of his married life with his young wife, Elizabeth Page. Recently the Manchester Historic Association placed a bronze tablet on a large boulder set at the corner of the building to mark the place as the home of the Revolutionary hero. This is the only dwelling left of those that stood on the farms mentioned. Job Rowell's house stood near the site of the residence of Hon. E. A. Straw, and the Hall home was on upper Bridge Street. These comprise most of the locations of the houses on land purchased by the Company.

In obtaining possession of the land on the east side of the river, considerable difficulty and delay was incurred in securing the title to a narrow strip of land extending along the east bank from above the Blodget place, later the Kidder house, on the north, and extending down the river to Stark Street, of the present day. This tract contained five acres, and it will be readily seen from its situation was not only desirable, but necessary to the accomplishment of the designs of the Company. In fact, the difficulty in the way of getting possession delayed the improvements intended. The land had been a part of the estate of Moses Senter, deceased, and was held by his heirs, represented by a John Coe of Meredith. Finally, at a meeting of the directors held in Boston, August 11, 1840, it was voted to defend a suit of John Coe against the Company

or compromise relative to the Senter lot.¹¹ A committee was chosen to act in the matter, and a little over a year later, August 31, 1841, in consideration of \$8,000, a warranty and also a quitclaim deed was received from Mr. Coe, countersigned by a dozen or more persons, heirs at law of the Senter property. So at last the Company secured the undisputed right to the river bank and the proposed site of its future operations.

The land on the east side has been disposed of except about seven hundred acres. Between the mills and Elm Street, and north of Granite Street, there are about twenty-five acres occupied by tenements and boarding houses. There are 610 tenements in all, most of them constructed with modern conveniences, and rented upon moderate terms. The Company also keeps open a little store where its operatives may obtain remnants of its manufactured products at reduced prices.

The mills, shops and various auxiliary buildings connected with the manufactories, nearly all built of brick, and with incombustible roofs, cover an area of 1,958,433 square feet, equal to about forty-five acres. The floor space of these buildings comprises over 165 acres. The yards in which the mills are located have an area of over 179 acres.

The first two mills built on this side of the river by the Amoskeag Manufacturing Company for its own occupancy were each 157 feet long, 48 feet wide, and six stories in height, being exactly alike and standing 88 feet apart. These mills were built in 1840-1841, and the space between was filled by Mill No. 6, sixty feet wide, in 1859-1860, the three presenting the appearance of one structure. At each end a picker house was built 50 feet long and 32 feet wide. Carding and spinning are done here. South of this large structure,



NOS. 1, 2 AND 6 MILLS

MANUFACTURING COMPANY

the Senter lot. A commitment was made in 1859, and a little over a year later, the company received a warrant of \$8,000, a warrant received from Mr. Coe, co. heirs at law of the company secured the undeveloped site of its proposed site of its

has been disposed of between the mills at there are about two and boarding houses them constructed with moderate terms.

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The floor space acres. The value of over 179 acres, this side of the for its own feet wide, and

88 feet ap- and the space for in 1859-1860 structure. A and 32 feet w South of this large



NOS. 1, 2 AND 6 MILLS

in the upper yard, was erected in 1844, Mill No. 3, which was rebuilt in 1870, and is 440 feet in length, five stories in height, with a width varying from sixty-five to seventy-two feet. Carding, spinning and weaving are the products of this mill. Along the upper canal is the counting room building, 110 by 36 feet, three stories in height, and south of it another building, 900 feet long by 30 feet wide and three stories in height. The foregoing mills comprise the "Upper Level."

Mill No. 4, in the south end of the lower yard, was built in 1847. Originally 260 feet long by 60 feet wide, and seven stories high, this mill was given an extension in 1872, 60 feet long and 60 feet wide. In the rear of the mill were two picker houses, 56 feet long and 37 feet wide, three stories high,

North of No. 4 Mill was No. 5, 257 feet long and 60 feet wide, with a picker house 62 by 44 feet in the rear. There was an addition built in 1855. In 1899, Nos. 4 and 5 Mills were torn down and a large mill built, 492 by 101 feet, five stories and basement, to replace them. At the north end is a picker house 98 by 153 feet. In the main building is carding, spinning and weaving.

At the north of Nos. 4-5 mills is a dye house and gingham mill, consisting of a main building with two wings. The building in the centre, 120 feet long, 67 feet wide, and three stories in height is occupied by dressing machinery for gingham. The north wing, 203 by 67 feet, four stories high, is used for dyeing and dressing. The south wing of the same size, three stories high, is the dye house. The whole is known as No. 7 Mill, and was built in 1869.

Five years later, in 1874, there was another gingham mill built directly parallel to the north section of Mill No. 7. This

mill, 260 by 68 feet and four stories high, is known as Mill No. 8.

North of the west end of mill No. 8, and at right angles with it, in 1880, Mill No. 9 was built upon piles driven in the land made by filling the river in 1841-2. This mill is 473 feet long by 100 feet wide, four stories and a basement, at the north end of which is a picker building 135 feet long, 63 feet wide, and four stories high. Carding, spinning, weaving, and dressing are done in this mill. Opposite, along the river bank, is a large dye house.

In 1886, the Company built another large mill on the east bank of the river, about half way between the "red gate," so called, which is at the head of the lower canal, and Bridge Street. This mill is 492 feet and 10 inches long by 100 feet and six inches wide, and five stories high. At the south end is a picker building three stories high and 150 feet long by 125 feet wide. The west side of the basement is the wheel house. South of this picker house was built in 1888 a cotton store house, 141 feet long by 124 feet wide and six stories high, on the west side of which is a boiler house 32 by 124 feet. The mill above is known as No. 10, or the Jefferson Mill, where there are carding, spinning, warping, slashing, drawing and weaving. Just below this is the bag mill, or old hosiery, where the work is carding, spinning and weaving for cotton bags.

In the upper yard, opposite the Jefferson Mill, are No. 1 and No. 2 Langdon mills, with spinning and weaving. No. 1 was built in 1860, but widened later, and is 220 by 75 feet. No. 2 was built in 1868, and is 283 by 75 feet. Along the upper canal, in front of No. 2 Langdon, or South Langdon, are shops where leather top rolls for all the mills are covered. Then come the machine shops.

South of Dean Street, in the upper yard, is the big Amory mill, 519 feet by 94, with an extension 103 by 101 feet, all five stories high. At the south end is a picker house 88 by 85 feet, four stories high, with a wheel room in the basement. Beyond this is a six-story cotton house, 98 by 94 feet. In the Amory are carding, spinning, dressing and weaving.

The Company's mill No. 11 was built in 1889, on the west side of the river, south of Bridge Street, and facing McGregor Street. It is 533 feet and eight inches in length by 103 feet and four inches in width. In 1891, an addition was built, 366 feet and four inches long, thus making the entire mill 900 feet long by 103 feet and four inches wide, four stories high at the north end and six stories high at the south end. In this mill are weaving and dressing, and cloth room departments.

In 1902, the Company built its first and only wooden weave shed on the west side of the river, facing on Main Street, the north end coming at the junction of Main and McGregor Streets. The building is 504 feet long by 98 feet wide, two stories high with basement of brick.

The Coolidge mill was built in 1909, on the west side of the river, facing McGregor Street on the north of Bridge Street and near the junction of these streets. It consists of a main mill four stories high, 704 feet long and 103 feet wide, with two wings on the east side, both being 204 feet long and 103 feet wide. The north wing is four stories and the south five stories in height. Carding, spinning and weaving are done in this mill. A passageway over Bridge Street connects this mill with No. 11.

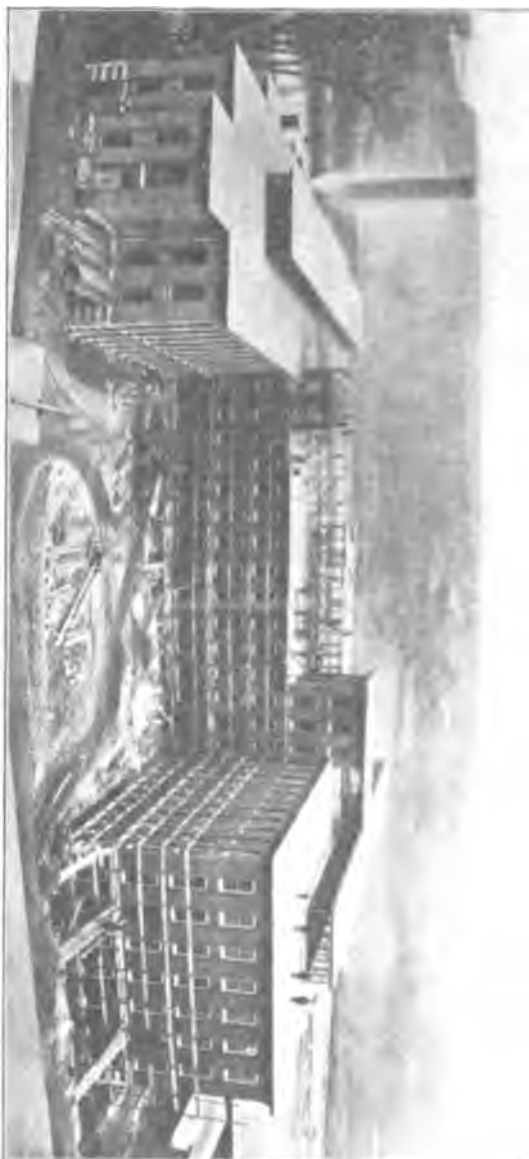
While the Coolidge mill was being built a new power

plant, consisting of a turbine engine station and a boiler house, was constructed on the east bank of the river, north of the Jefferson Mill. This steam turbine station is 151 feet long by 67 feet wide. From the west end of this building and running north on the river bank, is the boiler house, 529 feet long and 44 feet and eight inches wide. At present there are two 5,000 and one 7,500 horse power engines, in the engine house, with plenty of room for more when needed, and sixty-four boilers, each rated at 150 horse power, in the boiler house.

At the foot of Stark Street, the canal spanned by a bridge, is the entrance to the long building reaching along the upper canal, where are situated the counting room and offices of the company. This is really two buildings, the counting room and the former cloth room. The first is 36 feet wide and 110 feet long, three stories in height. On the second floor, slightly higher then the entrance from the street, is the spacious apartment which gives name to the building, while in the rear of this are the offices of the agent, general superintendent and assistant officers. South of these is the manufacturing office, and a large hall where the stockholders' meetings are held. On the lower floor are the rooms of the civil engineers, and chemist. The upper floor is used for the purchasing department and architect.

Besides these main mills and buildings are many minor structures that need not be mentioned, but each having a place in the manifold needs of a great manufacturing industry.

The Southern Division includes what was the Manchester Mills, Manchester Old Print Works and the New Print Works. No. 1 Mill was built in two sections, the north half in 1844 and the south half in 1850. Its entire length is 440 by 60 feet in width and six stories high. There is a picker



NOS. 7 AND 8 MILLS

house in the rear. The work in this mill is carding and spinning.

South of this is No. 2 Mill, built in 1850. This is 324 feet long by 60 feet wide and seven stories high, fitted for carding, spinning and dressing. There is a picker building adjoining.

No. 3 Mill is on the river bank just south of No. 4 on the central division. It was built in 1880, is 432 feet long by 50 feet wide and four stories high. Weaving is done in this mill.

No. 4 Mill is the building along the canal and was built in 1848; it is about 1,100 feet long by 30 feet wide and three stories high. In it are the store room, southern division machine shop and pipe shop. At the foot of Central Street, in this building, which was formerly the Manchester Mills counting room, are now the telephone office and offices of the electrical engineers. At the south end, on Granite Street, which was formerly the Print Works counting room, is now the yard office and watch room.

No. 5 Mill, north half built in 1855 and south half in 1889, stands along the river bank south of No. 3. It is 290 feet by 54, five stories high. This mill is devoted to weaving and spinning.

No. 6 Mill was built in 1876 and is 163 feet long by 60 feet in width, with six stories and is along the river bank south of No. 5 and the work is combing, drawing and spinning.

No. 7 Mill, built in 1853, is about 460 feet long by 66 feet wide, and four stories high. Drawing and carding are done in this mill.

No. 8 Mill, built in 1853, was formerly the old print room. It is 160 feet long by 65 feet wide and four stories in

height. It joins No. 7, runs east and west, and the work is wool washing and carding.

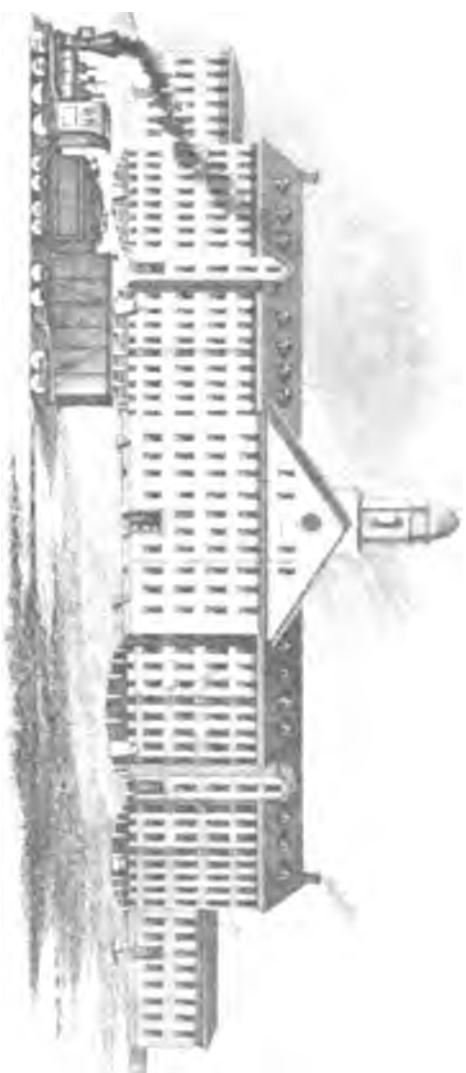
No. 9 Mill, built in 1853, a top wooden story added in 1903, is 227 by 54 feet and five stories high. In this building are wool sorting and storing. It runs north and south and is just below No. 2 Mill.

Nos. 1 and 2 store houses, south of Granite Street next to the depot, built in 1859 and 1875, are 160 by 192 feet and contain an automobile garage, steam turbine room and storage for wool. South of this is a boiler house, built in 1905 which is 165 by 89 feet.

South of Granite Street, between the lower canal and the river is the New Print Works, built in 1901, and having a floor area of 498,740 square feet. The main building, 784 by 100 feet, extends along the river and has two wings, the south one 233 feet by 100 feet and the north one 217 by 100 feet, all four stories high. Here are weaving, both gingham and worsted, dyeing, bleaching and cloth finishing. In the square between the wings is a three-story addition connected to the main building. The Company's printing office, which is fully equipped for first-class work, is located on the top and lower floors. Perching is done on the second floor. A portion of the lower floor is occupied by the southern division lighting station.

Below the new print works building is the old Namaske mill, now a store house for cloth, and forming the southern limit of the present plant.

On the west side of the river, not far north from Granite Street, is the laboratory of the print works, the lumber yards and lumber sheds of the Company, storage sheds and planing mill. On the same side of the river is the foundry, built of



OLD MANCHESTER MILL.

brick, in 1883, and since enlarged; near it is the pattern house, also a brick structure, and across from that the central division power station at the west end of the Company's bridge.

As late as 1880 the mills depended almost entirely upon water power to run the machinery, but for heating and minor purposes boilers were installed, at that time there being fifteen of these of 150 horse power each, in four boiler houses. During the year 1883 the big boiler house and chimney on the west side of the river were built which took the place of the four boiler houses in the central division. One of these was at the north end of No. 3 Mill; one next to No. 7 dress room, north of No. 5 Mill; one in the rear of No. 4 Mill and one at the dye house in the rear of No. 9 Mill; also a small one in the dry house. Upon building the Jefferson Mill, or Mill No. 10, in 1886, steam power was instituted and that mill was equipped with a steam plant of its own.

Upon acquiring the Manchester Mills and Print Works a new chimney and steam plant were built, in 1905, south of Granite Street, which enabled the Company to discontinue the use of the old ones. In 1909, the big northern division power house and boiler house were built, so that the Langdon, Jefferson and Amory boiler houses could be discontinued. All these changes, made on a big scale, meant much economy and better work. The Coolidge Mill is heated from the central division boiler house, and has electric power from the northern division power house. No. 11 on the west side, is mostly run by steam and is heated from the central division power house, while No. 12 weave shed, though heated by steam, has electric power from the central division power plant. The first large engine was put in the north end of No. 3 Mill in 1876, but it was taken out in 1912. It was a two-cylinder, 1,000 horse-

power Corliss engine. The second engine was put in just north of No. 5 Mill and is a 2,000 horse power Corliss, 36 x 72 inches. It runs Nos. 4-5 Mill and No. 7 dye house and dress room. In October, 1891, the large thirty-foot iron pulley of this engine went to pieces, killing three persons, as described elsewhere. The pulley was replaced by one with an ash rim. No. 3 engine was installed in the machine shop in 1890 and is a Cummer, 250 horse power. No. 4 is a Wright tandem compound, installed in 1886 and of 1,200 horse power. It runs Nos. 1, 2, and 6 mills, and is located at the north end of No. 3 Mill. No. 5 was installed in No. 11 Mill in 1889. It is a 38 x 48 inch, two-cylinder Wright, 1,800 horse power, and runs this mill. No. 6 is a Wright tandem compound, located in the north end of No. 9 Mill and was installed in 1892. It is 30 and 56 x 48 inches, and of 1,500 horse power. No. 7 engine was in the Jefferson Mill. It was installed in 1896, of 2,150 horse power, triple expansion compound McIntosh & Seymour, 22 1-2, 36 and 40 x 22 inches. It has been recently removed and its use discontinued on account of economy and increasing adaptability of steam turbines to drive through electric motors. No. 8 engine is at the west end of the Company's bridge, installed in 1902, cross compound, 4,500 horse power and runs a generator which distributes electric power to motors in several mills. No. 9, a Harris Corliss of 150 horse power, and No. 10, a 200 horse power Ide, run the river dye house. On the southern division is a 650 horse power Brown engine at the New Print Works south of Granite Street. There were three engines on the northern division, at the Langdon, a 1,050 horse power McIntosh & Seymour, cross compound installed in 1900, a 1,050 horse power Harris Corliss in the south end of the

Amory, and an 850 horse power at the same place. These were succeeded in 1912 by electric motors.

The total horse power of all the engines in use November 1, 1912 is 12,250. A number of these engines are connected with motors and generators.

There are four steam turbines, one at the southern division power house, a Curtis Vertical of a rated capacity of 2,000 kilowatts, and a maximum of 2,700 horse power; two Curtis horizontal turbines at the northern division power house of a rated capacity of 3,500 kilowatts each, with a maximum capacity of 5,000 kilowatts, which equals 6,666 horse power; and a third turbine with a rated capacity of 6,250 kilowatts, and maximum capacity of 7,250 kilowatts which equals 10,000 horse power, these turbines make a maximum total of 26,032 horse power.

The northern and southern division turbine stations and No. 8 power house on the west side of the river, are connected by three triple conductor 500,000 circular mill marine cables laid in the lower canal. These cables are connected in parallel and give a total of 1,500,000 C. M. capacity or maximum load of 5,000 kilowatts.

The total power of the water wheels is, by divisions: northern division, 6,000 horse power; central division, 7,586 horse power; southern division, 3,251 horse power; a total of 16,837 horse power. The Stark Mills have besides wheels of 2,357 horse power and there is one at the Amoskeag Paper mill of 125 horse power. The water wheels, the engines now in use and the steam turbines make a total for the Amoskeag Manufacturing Company of 52,787 horse power, this amount not being used at any one time. Since 1896 electrical power has been steadily gaining in extent of use, so that to-day there

are 370 electric motors installed, capable of furnishing 30,000 horse power. The total power required to run all the mills is 36,000 horse power divided among water wheels, engines, steam turbines and electric motors according to varying conditions.

CHAPTER IX

WARP AND WEFT

MILL No. 11 and the Coolidge Mill, standing on the bluff overlooking the river, present the latest type of mills with all the modern ideas and improved surroundings. They are indeed noble appearing buildings, the latter named in honor of the Company's one-time president and illustrious leader, the Hon. T. Jefferson Coolidge. A tablet on the wall near the entrance bears testimony to his memory.

The grounds sloping towards the river are, in their season, relieved here and there by beds of flowers of many hues and hedges of green shrubbery. These mills stand on the farm land once owned and improved by Dr. Dean in the early stages of the Company's work. Between these structures and the site of the Old Mill at Amoskeag Falls the Company owns many acres of land affording valuable situations for the building of the mills which will certainly be demanded in the years to follow. To the west of them, upon what was then uncultivated land sparsely clothed with stunted pitch pines, there has within a few years sprung into existence the suburb of McGregorville, named for the pioneer settler in this vicinity, and quite a city by itself. This presents a marked contrast to the hamlet of Old Amoskeag, which is no larger to-day than it was in the era when it promised to become the centre of the manufacturing metropolis, but which lost its prestige when the surveyor planted his tripod on the east bank. Still the old place is

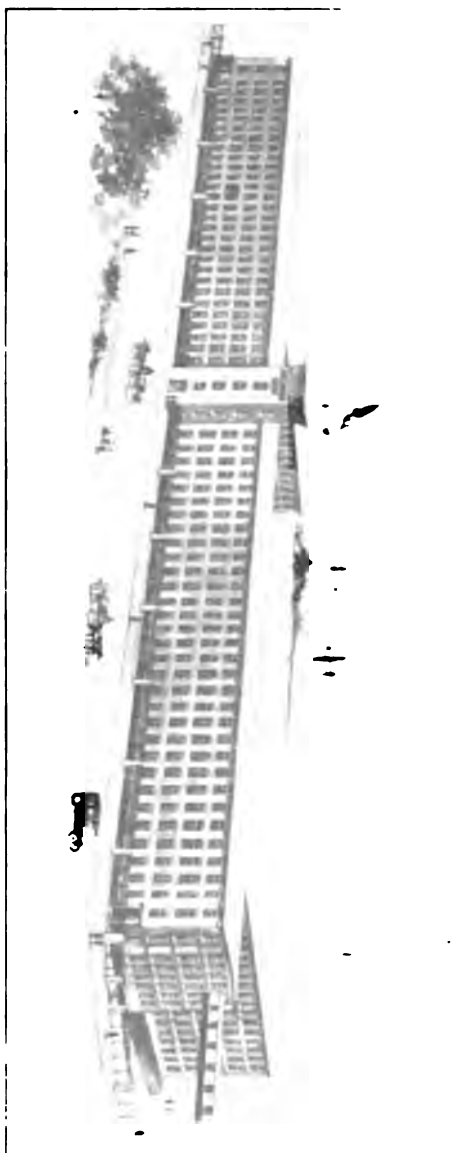
not without its hope. When the street car line shall have been extended to its early stage road, since modernized as Front Street, as it is certain to be within a few years, then will be given to its present appearance, new life and activity; and when the wheels of industry shall again mingle their subdued roar with the rumble and thunder of the Falls, then indeed shall Amoskeag awaken from its sleep and participate in the bustle and thrift of a busy manufacturing city.

The valuation of the town of Manchester at the time of the sale of land by the Company was \$555,270, while the number of polls was 244. The tax rate for that year was \$1.66; and the taxes were \$2,235.40. In 1855 when our next estimate is taken, the valuation of the taxable property in the city was \$8,883,248.00.

The steady growth and progress of the Amoskeag Manufacturing Company during the eighty years since its incorporation cannot be more vividly presented than by giving the volume of business accomplished at different periods, a few pages of which afford the most eloquent and convincing argument.

The machinery of the first mill on the east bank of the river was set in motion late in November, 1841, and in 1855 five mills were in operation, capable of running with the following capacity and output:

No. 1	carried	8,960	spindles	and	234	looms
No. 2	"	8,832	"		250	"
No. 3	"	20,478	"		545	"
No. 4	"	24,576	"		636	"
No. 5	"	20,000	"		480	"
		<hr/>				
Amount		82,846	"		2,145	"



COOLIDGE MILL.

MANUFACTURING COMPANY

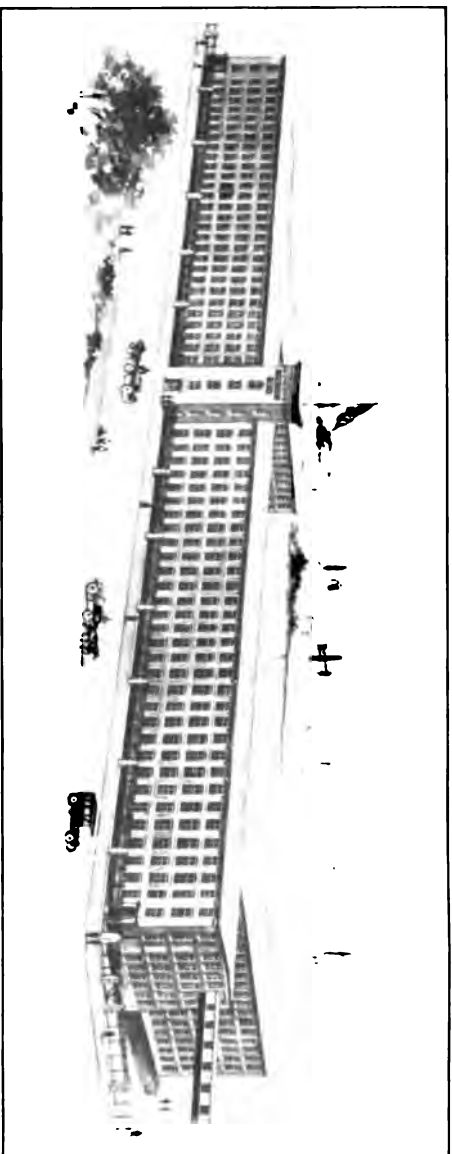
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"	250 "
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"	636 "
"	480 "
	<hr/>
	2,145 "



COOLIDGE MILL

At a meeting held March 19, 1841, the Treasurer offered the following statement of the resources of the Amoskeag Manufacturing Company at that time:

ESTIMATED NEW VALUATION OF PROPERTY, 1841

Schedule A	Amoskeag Mills and Outfit	\$70,000.00
	Buildings in Goffstown, Bedford, Amoskeag	10,000.00
B	Land in Goffstown, Bedford and Amoskeag, Supposed to be About 1,200 Acres.	25,000.00
	Land in Manchester, About 1,400 Acres	75,000.00
C	Rentable Buildings, Water Power, etc.	25,000.00
	Blodget's Canal	25,000.00
	Amoskeag Bridge	3,500.00
	Factory Canals	114,737.10
	Water Rents	30,000.00
	Machine Shop, Cost	48,556.58
	Boarding Houses	28,921.39
	Counting Room	3,762.60
D	Hooksett Stock	100,000.00
	Webster Farm in Derry, (Timber)	7,500.00
	Whittier's Farm in Hooksett (Ledge)	3,000.00
	Nesmith Farm (Wood)	2,000.00
	Concord Company Stock	90,000.00
		<u>\$662,077.80</u>

Improvements planned at Amoskeag Mills will enhance value.

Amoskeag and Hooksett canal reduced in value one-half by anticipation of railroad.

There were profit and loss items aggregating	\$118,048.81
Add balance of profit and loss	48,453.59
	<u>\$166,512.40</u>

Less difference between old and new valuation

Old valuation	\$776,219.91
New valuation	662,077.80
	<u>\$114,142.11</u>
Bro't over	\$166,512.40
	<u>114,142.11</u>
	<u>\$52,370.29</u>

The annual amount of cotton consumed in 1855 was 9,600,000 pounds; annual manufacture of cloth, over 22,500,000 yards a year, or 72,000 yards every working day, which in an unbroken line would reach over forty miles.

The manufactures consisted of tickings of various kinds, denims, drilling, sheetings, flannels, etc.

The number of operatives was, females 2,500; males, 700. Amount paid for help monthly, \$40,000.

Number of tenements 109, including boarding houses and homes for overseers and other officials.

Twenty years later, in 1875, the number of mills had increased to nine, and these carried 125,000 spindles, and 3,500 looms. The working force was about 2,700 hands, of which 1,800 were females. The sole dependence then was water power, which required fourteen water wheels, seven on each level, with an aggregate of 3,500 horse power. The mills required 225,000 pounds of cotton a week; 600,000 yards a week of different goods were manufactured, of which a little more than one-half were colored goods, the latter class consisting of tickings, denims, fancy shirtings and gingham, while the white goods were drillings, flannels, sheetings and bags.

There were woven in a year 130,000,000 skeins of yarn, of 840 yards each, which was a total length of 60,000,000 miles.

This would make a strip of cloth twenty inches wide, long enough to girdle the globe. The daily production of cloth was 100,000 yards, or over a yard for every second of time. The payroll was a little over \$20,000 a week or about \$1,250,000 a year.

In marked contrast to this it is interesting to note that during the year 1813, just one hundred years ago, the average daily manufacture in the old mill at Amoskeag, when Squire John Stark was book-keeper, was 358 skeins of cotton yarn. This amount of yarn at factory prices in those days was worth about \$29.22.

In comparison to previous figures the present volume of business is shown by the following table:

STATISTICS OF 1912

Incorporated	1831
Re-organized	1911
Annual Pay Roll	\$7,800,000
Weekly Pay Roll	\$150,000
Number of Males Employed	8,500
Number of Females Employed	7,000
Total Number Employed	15,500
Number of Cotton Spindles	620,000
Number of Worsted Spindles	50,000
Total Number of Cotton and Worsted Spindles*	670,000
Cotton Looms	22,700
Worsted Looms	1,700
Total Cotton and Worsted Looms	24,400
Number of Yards of Cotton Cloth Woven per Week	4,715,790
Number of Yards of Worsted Cloth Woven per Week	263,640
Number of Yards of Cotton and Worsted Cloth Woven per Week	4,979,430
Number of Yards of Cotton Cloth Woven per Annum	245,221,080
Number of Yards of Worsted Cloth Woven per Annum	13,709,280
Number of Yards of Cotton and Worsted Cloth Woven per Annum	258,930,360
Number of Bags Woven per Annum	1,630,000
Miles of Cloth Woven per Hour	50
Miles of Cloth Woven per Day	471
Miles of Cloth Woven per Annum	147,119
Number of Pounds Cotton Consumed per Annum	54,600,000
Number of Pounds Wool Consumed per Annum	15,300,000
Tons of Coal Consumed per Annum	131,484

Statement Showing amount of wages paid a year at the end of ten-year periods:

1831— \$36,298	1860— \$633,680	1890—\$2,435,481
1840— \$74,239	1870—\$1,107,428	1900—\$2,772,811
1850— \$487,005	1880—\$1,604,322	1910—\$6,176,353
Total Amount of Wages Paid to 1912		\$121,123,429
Gallons of Oil Consumed per Annum		75,000
Square Feet of Floor Space in Buildings		5,844,340
Number of Acres of Floor Space in Buildings		137

*The total number of cotton spindles in the world at the end of 1911 was estimated at 137,278,752 compared with 133,384,794 at the end of 1910. The number of spindles for England at the end of 1911 was 54,522,554; for the United States, 28,872,000; for Germany, 10,480,090; for Russia, 8,671,664; for France, 7,300,000; for India, 6,250,000; for Austria, 4,563,745; for Italy, 4,582,065 and for Japan, 2,131,494.

CAPITAL STOCK

1831, capital authorized by state legislature	\$1,000,000
1841, " increased	600,000
1846, " "	900,000
1848, " "	500,000
1856, " "	1,000,000
1907, " "	1,760,000
Authorized capital	5,760,000

In 1845 an act of the legislature was passed allowing the Company to increase the capital stock \$400,000, but conditions were imposed which caused the Company to decline the opportunity. The following year the capital stock was increased \$900,000. February 5, 1907, the state legislature authorized two million additional capital, provided the whole amount did not exceed six million.

July 8, 1835, it was voted to issue 72 new shares to persons holding stock in the Hooksett Manufacturing Company, in exchange at \$400 each as one-half payment of the amount of said shares in the Amoskeag Manufacturing Company at \$1000 a share.

Viewed in the broadest perspective, the Amoskeag Manufacturing Company must be considered more than a mere producer of manufactured fabrics, more than an intermediate factor between the producer of the raw material and the consumer of cotton and woolen goods. Planned by the founders upon a wider scope of action, the control of the water-power of the Merrimack was not alone for their own glory, but that others might also share in the results. They not only sought to shelter and protect their own workmen, but devised a town for others who might become indirectly interested in their prosperity. The marked and unbroken success of the Company is due to this conservative and progressive course pursued by the managers

since the beginning. There has been no wild scheme of speculation; no reaching for some chimerical object;—some outcome to be gained only by fortunate conditions beyond the control of the agent striving to win the prize. It has been the rule never to spend a dollar that has not already been earned; never to depend upon profits that had not been secured.

It has been the policy to manufacture only those goods commanding a fair price based upon their own merits, and thus the Amoskeag Manufacturing Company has been safe in pushing ahead, the orders ever having been in excess of its capacity of production, as great as that has been. During the Civil War, when other manufacturers thought best to shut down their mills it kept steadily forging ahead. No panic has affected the stock in market. During the periods of dull sale of cotton goods, it has found a fair profit in its gingham and dress goods.

CHAPTER X

WAYMARKS OF INDUSTRY

THE old stone dam across the river, which succeeded the two sections of wood constructed by the early mill owners was built in 1837-1840, under the supervision of David A. Bunton. This was considered at the time as a very satisfactory piece of work and was an object of wide interest. But upon trial it proved to have been built too far above the rapids, and it was not raised to a sufficient height to fully accomplish the purpose for which it was intended.

This fact was one of the first matters that attracted the attention of Mr. Ezekiel A. Straw upon becoming Agent of the Company, and he devised a plan for a new structure, which was built in 1871, under his personal direction. Beginning from the west bank, the old dam had a run straight across the stream to about three-fourths of the distance, and then it turned downward to the gate house, so as to form the inner wall of the canal or reservoir. The new dam was built in a curve, several yards below the old one, and in two sections. The first, or main wing, running from the west bank to the rocks somewhat to the east of the middle of the river, is four hundred feet in length. The east section, with its swing to the gate house, is 231 feet long, making the entire length 631 feet. It averages twelve feet in height, and it is eight feet thick at the top. Its total cost, in round numbers, was \$60,000.

This makes the entire descent of the river, from the crest

of the dam to the foot of the rapids just below McGregor bridge, at average flood, fifty-five feet. The three foot flash boards raise this, of course, to fifty-eight feet. The natural fall of the rapids was about fifty feet. In comparison with these figures, the mean fall at Lowell is thirty-seven feet, while at Lawrence it is twenty-eight feet, and at Garvin's Falls at Bow, N. H., it is twenty-eight feet. In each of these cases measurement is considered from the top of the dam. The passage up the river of the fish, which made the Merrimack River noted for its fisheries at the rapids or cataracts, was checked completely when the dams were built at those places.

The first definite action towards the future development of the Company's interest on the east side of the river at Amoskeag was taken at an adjourned annual meeting of the directors and stockholders, held at the office of Sayles & Hitchcock, No. 83 Kilby Street, Boston, August 26, 1835, when it was voted to purchase land and property not to exceed one hundred thousand dollars.

The early plan of the Company for the new township provided as we have seen for certain streets in a well laid out municipality, among them being Elm Street, one of the widest and destined to become one of the handsomest business thoroughfares in New England, together with Chestnut, Pine, and several other streets, as mentioned in a previous chapter. On January 29, 1841, further action was taken in that direction by making provisions for Canal Street, in consideration of the discontinuance of the following roads by the town, viz:

The road beginning at the east end of Amoskeag Bridge (McGregor) and extending easterly to the Phillip Stevens' house so called, to the easterly end of Merrimack Street; also, the road beginning at said Amoskeag Bridge and extending easterly by

the said hill, so called, to Elm Street. Also the road extending from the Old Falls Road, so called, near the house formerly owned by George Clark. Also the road beginning at the north line of the Phillip Stevens farm near Merrimack River and extending southerly by the Barrett house, so called, to the south end of Elm Street. The town of Manchester shall henceforth have and the said Company grant to said town from this time forward Canal Street, Stark Street, Mechanic Street and all other streets the Company may lay out west of Elm Street.

At that time there were three struggling church societies at Amoskeag village which met in a hall built by Dr. Dean and others, but only one church or meeting house, as it was called in those days, within the territory of the present city of Manchester. The solitary house of worship was located at the Center or "Old Village," and naturally one of the first appeals was for the establishment of a church to accommodate the citizens of the new town.

After two previous entertainments of the request, on March 19, 1839, upon a petition of the First Congregational Society at Amoskeag, the Company voted to build a meeting house on Lot No. 135 Hanover Street, and transfer the same to the society upon payment of the cost of the building exclusive of the value of the land. November 16, 1839, the deed was given the society in consideration of one thousand dollars.

This was the beginning of a long series of benefits extended to the different religious societies of the town. July 9, 1839, ten thousand square feet of land on Lowell Street, 720 feet east of Elm, as a site for a meeting house, was voted to the First Universalist Society of Amoskeag and a deed was given March 25, 1840. At the directors' meeting of July 9, 1839,

it was also voted to remodel the school house at Hooksett for the purpose of a church. On the 22d of July, ten thousand square feet of land, marked "Church" on the plan was voted the First Baptist Society and July 30, 1839, a similar bequest was made to the Free Will Baptist Society, the last lot being located at the corner of Chestnut and Merrimack Streets. The deed to the former society was given December 14, 1840, and that for the latter, January 4, 1842. Two years later the last named society deeded this lot to the Unitarian Society, by permission, and on July 20, 1871 this body, by consent, removed to the site it now occupies.

January 8, 1840, the Second Methodist Episcopal Society was favored with a lot for \$1250, and the deed was given May 24, 1842. The St. Paul Methodist Episcopal and People's Methodist Episcopal churches were given deeds for lots of equal size, November 11, 1881.

August 1, 1843, the directors voted to the "Rector, Wardens and Vestry of St. Michael's Church," Manchester, a lot of land not exceeding ten thousand square feet. The Second Congregational Church, commonly known as the Franklin Street Church, was given the deed for its lot on the street named, July 7, 1847. On October 23, 1852, voted to build a parsonage in place of church for above society, "as church lots should not be used for secular purposes." July 15, 1844, the Unitarian Society was favored with one thousand feet of land. August 30, 1847, granted the site of a church to the Catholic Society of ten thousand square feet of land, and March 11, 1848, favored the Free Will Baptist church society with a similar gift. November 20, 1880, land was voted the French Catholic Society as a site for a church; May 27, 1881, the English speaking Catholics on the West Side,

and December 2, 1882, the First Presbyterian German church were favored with lots, the last named situated on the corner of Bath and Second Streets. June 6, 1885, the Swedish Lutheran Church received the same recognition. So one after another of the earlier church societies, with the exception of one that was already established, have been recognized and their appeals for assistance answered.

April 24, 1840, the Company gave a lot for a school house in the vicinity of Amoskeag Falls. This house was burned in 1859, and the Company bought back the land for one hundred dollars, April 26, 1861. At this April meeting, in 1840, the site for an engine house was given, and nineteen acres of land for the purpose of a public burial ground. The deed for the last donation was given January 29, 1841, and this tract of land has since been developed and improved by the city into the beautiful Valley Cemetery.

The lot for the town house was voted January 9, 1841, to consist of ten thousand square feet at the corner of Elm and Market Streets, the site of the present city hall. The deed for this was made out February 24, 1841, in consideration of \$2,500. The town built its first town house that year, but this unfortunately was burned in 1844. The following year a new building was erected, which with repairs and some alterations, stands to-day the most historic structure in the city.

April 21, 1841, the deed was given for the site of District No. 2 school house on Lowell Street. September 10, 1842, a deed for 7,500 square feet of land on Manchester Street corner of Chestnut was given as the site for a school house, in consideration of \$500. This was the first high school in town, and the land has since been taken as the site of the present police station.

September 15, 1841, one thousand dollars was voted towards establishing a free bridge at Hooksett. April 5, 1842, in consideration of eight thousand dollars the right of way, land for street and site for toll house for Amoskeag bridge were deeded to the town.

January 28, 1846, the gift of one thousand dollars was bestowed upon the Manchester Athenæum, with which "to purchase books on Mechanic Arts and Sciences." When the City Library, an outgrowth of this institution, needed a site for a building, the Company gave the lot upon Franklin Street, January 30, 1869, comprising fifteen thousand square feet.

January 12, 1847, a lot of land on Franklin Street was also given as the site for a court house, and which is now occupied by the water works office and the Grand Army of the Republic, Louis Bell Post.

One of the attractive features of Manchester is her public commons, most of which have been gifts from the Company to the city. January 25, 1848, deeds were given for the land comprising Merrimack, Concord and Tremont Squares. October 23, 1852, Hanover Square was donated. Park Street Common was deeded to the city July, 1883, upon a condition that a curbing be placed around it. September 13, 1902, Lafayette Park, West Manchester, consisting of 90,500 square feet of land was deeded to the city. August 4, 1908, the Company leased to the city a tract of land 114,000 square feet for public use known as Parker Common.

In 1911, the Company developed a playground for the children upon the site of the old passenger station of the Concord and Montreal railroad, a gift at the time of the opening of the road to the corporation. A tract of land of an acre and two-tenths has been fitted with modern fixtures, shelter shed, toilet

building, baseball ground, running track, pond for wading, swings, appliances for athletics and other attractions for youth. The grounds are surrounded by a mesh fence, and entered by three iron gateways. In the winter this is flooded so as to form a fine skating pond for the boys and girls.

Late in 1911, the Company took action towards bestowing upon the city for a public park, the land about picturesque Rock Rimmon, and February 6, 1912, the Board of Mayor and Aldermen voted to accept a deed of a certain parcel of land upon which Rock Rimmon is situated, and containing 42.88 acres, consideration one dollar, bounded as follows:

Beginning at a point on the westerly line of Youville Street, three hundred and sixty-five feet north of the northerly line of Mason Street; thence by the westerly line of Youville Street seven hundred and fifteen feet; thence by a curve to the left of one hundred radius, one hundred and fifty-seven and seven one-hundredths feet; thence westerly, tangent to the last course and at right angles to Youville Street, five hundred and forty feet; thence by a curve to the left of four hundred feet radius, about three hundred and seventy-three feet; thence southwesterly tangent to the last course, eight hundred and seventy-five feet; thence by a curve to the left of four hundred feet radius, about three hundred and thirty-five feet; thence southerly, tangent to the last course, two hundred and forty-seven feet; thence by a curve to the left of one hundred feet, about one hundred and fifty-three; thence easterly tangent to the last course and parallel to the Amoskeag's Company's south line and fifty feet therefrom, six hundred and thirty-five; thence to the left, making an angle of 16 1-2 degrees with the last course, five hundred and eighty-one feet; thence to the left, by a curve of four hundred feet radius, about four hundred sixty-two feet to the point began at; bounded by a roadway the entire distance, fifty feet in width, containing forty-two and eighty-eight hundredths acres. United States Standard measure, therefore be it



COOLIDGE TABLET

Resolved, by the Board of Mayor and Aldermen that the offer of said company and the conditions imposed be accepted and that this Board place upon record its appreciation of the generosity of said company and that the thanks of the Board of Mayor and Aldermen in behalf of the City of Manchester, be extended to the officials of said company for the opportunity afforded said city to secure this valuable extension to its parks and playgrounds; and be it further

Resolved, that said deed and plan be and thereby, is made a part of this resolution and that a copy of said resolution be submitted to the officials of said company and be it further

Resolved, that this resolution take effect upon its passage.
February 6, 1912.

In Board of Mayor and Aldermen

Passed to be enrolled.

In 1851-1853 the Company constructed what became known as the Amoskeag Reservoir, which is situated between Oak, Russell, Harrison and Blodget Streets in Manchester. It is 484 feet long by 232 feet wide, and 17 feet deep, capable of holding 11,000,000 gallons. There are three pipe lines, leading down Brook Street to the pump house and mills, three-fourths of a mile distant. The pump house on the Northern Division has four double cylinders, and is run by water power, having a capacity of 2,000,000 gallons in twenty-four hours. An electric motor in No. 8 engine room on the west side, pumps into the system, with a capacity of 3,000,000 gallons in twenty-four hours.

September 2, 1835, the directors voted to buy "one thousand shares of Amoskeag Canal Company's stock at eight dollars each, five hundred of said shares at eight dollars each as a dividend to be divided in proportion to the number of shares in the Amoskeag Manufacturing Company." This action was affirmed by the stockholders at a meeting held

December 2, 1835. This offer was not accepted, and April 1, 1836, the directors voted to buy the stock at not over ten dollars a share.

October 7, 1835, it was voted to purchase the Locks and Canal Company at Hooksett.

July 26, 1837, it was voted to purchase the Amoskeag Bridge corporation, which company had built and owned the old McGregor bridge, then known as the Amoskeag bridge. It had been a toll bridge, but by this action of the Amoskeag Company it became free.

April 5, 1842, the Amoskeag Manufacturing Company received from the Amoskeag Falls bridge corporation eight hundred dollars for the right of way and land to approach the bridge; also, land for the site of a toll house on the east bank of the river.

In 1845 the matter of the control of the outlet of Lake Winnepesaukee, the source of the most important branch of the Merrimack River, was seriously agitated, and October 8, the Amoskeag Manufacturing Company voted to purchase a one-fifth interest amounting to \$20,000, in the Winnepesaukee Land & Water Power Company, organized by Mr. Amos Lawrence. The offer was rejected, and a one-third interest tendered, which was declined by the Amoskeag Company. January 12, 1847, however, it decided to place \$10,000 in the Cocheco Land & Water Company, then commanding privileges at the outlet of Lake Winnepesaukee. December 23, 1878, it was voted by the directors to pay, with the manufacturing companies at Lowell and Lawrence, one-third of the expense of the Winnepesaukee Lake Company, that the water of the lake should be "let down whenever needed by any company."

July 10, 1833, a special meeting of the stockholders was held at the Amoskeag tavern, which at that time was the most noted hostelry in this vicinity.

At the annual meeting called July 9, 1834, and adjourned to the counting room of Willard Sayles, Boston, the first dividend was voted, it being sixty dollars on a share of one thousand dollars. This was the first meeting held in Boston. Few semi-annual dividends have been missed since then, while there have been occasionally extra or special net earnings paid the stockholders.

A meeting of the directors and stockholders held April 13, 1836, voted that the former board should elect annually an agent to act for the Company in the disposal of its products.

October 8, 1839, the Board of Directors was given absolute power in the management of the corporation, the president of the board to be president of the meetings of the stockholders.

The annual meeting for 1840 was warned for Amoskeag, but was immediately adjourned to the east side. This fact applies to the meetings of 1841 and 1842. At the last named meeting, July 27, it was voted that "stockholders' meetings hereafter be held at such times and places as the Directors shall appoint." The meeting the following year, 1843, was the first one called and held at the counting room of the "New Mill" on the east bank of the river.

The annual meeting called for July 14, 1857, was adjourned to October 1, and henceforth the annual meetings were held in the month of October.

October 2, 1862, the by-laws were changed so there "should be not over nine or less than five Directors."

Previous to June 2, 1893, money to meet the pay roll was shipped from Boston fortnightly, but upon that date it was

voted to make up same from deposits at Amoskeag National Bank of Manchester.

October 11, 1894, it was voted to close semi-annual accounts on December 31 and June 30 each year, and that dividends be paid February 1 and August 1, instead of June 15 and December 15, as heretofore. January 21, 1909, the time of paying the dividends was changed to July 1 and January 1.

At the meeting which effected the purchase of the Amory and Manchester Mills, it was voted to make the par value of the shares of the Amoskeag Manufacturing Company one hundred dollars instead of one thousand dollars, as heretofore since the incorporation. The number of shares was increased, accordingly, from four thousand to forty thousand shares, an exchange to be made with the stockholders on the basis of ten new shares for one of the old denomination. The state legislature ratified this action on February 5, 1907, and empowered the directors to issue to the stockholders of the Amory and Manchester Mills additional stock to the amount of 17,600 shares, whose par value was one hundred dollars. This made the entire stock \$5,760,000.

A more important change than this was effected in October, 1911, when, upon the recommendation of the directors, the stockholders agreed to the transfer of all the property of the corporation to the trustees of a voluntary association to be known as the Amoskeag Manufacturing Company. This company issued 115,200 shares of preferred stock, bearing 4 1-2 per cent. cumulative dividends, and 172,800 common shares. The new association assumed all the liabilities of the corporation, and to the shareholders of the latter body two preferred and three common shares in the association

were issued for each share of stock in the corporation. The directors of the corporation became the trustees of the new association, and the officers and employees remained the same.

In the summer of 1911 the Company established an employment department, with offices in the new brick building erected on Canal Street between Stark and Market Streets. It was believed by this method the several departments of the mills would be relieved of the almost constant attention demanded of the overseers and others hiring help to meet the situation with the ever changing force employed.

It has been shown that the department was able to become good judges of the class of workers desired in each mill. As one has aptly stated : "Conditions in every process have been conscientiously studied, and the success which this department has attained is far greater than its firmest supporters dared to hope. Its marked success does not consist in the number of men and women employed, but in the quality of men and women added to the roll through judicious selection." The number of persons who have to be dealt with can be understood by the fact that during the month of September, 1912, over seven hundred people were hired. Other months have varied in the number employed. In December, 1912, three hundred and sixty persons were added to the pay rolls. The difference, was due mainly to a smaller number leaving the mills. About 2 per cent. leave the mills every week.

The cosmopolitan character of the help employed is proven by the number of each nationality employed during the month of December, last mentioned. Of the three hundred and sixty persons, eight per cent. were Americans, thirteen per cent. Irish, eight per cent. Polish, eleven per cent. Greek, fifty-one per cent. French, and the balance was made up of English, Germans, Scotch, Swedish, Lithuanians and Russians.

Occupying rooms in the same building as the employment department, the Company has inaugurated what is known as the Accident Department, which is conveniently located and fully equipped to meet emergency calls and care for all minor injuries. Two trained nurses are in constant attendance at this hospital ward, while a surgeon is always at hand. Two other trained nurses are on duty among the families of the employees who need their services at their homes. Besides helping care for the ill and injured, they advise and instruct in the welfare of infants, as well as attend meetings of mothers where the subject of proper treatment of children is intelligently considered. A woman capable of doing general housework is furnished those families who are burdened with sickness. Already the good work of this department has become manifest.

To meet its own requirements the Company has fitted up one of the finest plants in the state for all kinds of plain and fancy printing, ruling, color printing, bronzing, embossing and bookbinding. This branch of industry was first put into active condition about 1894 in No. 11 cloth room under the direction of Gen. Henry A. Farrington, though a smaller office had been fitted up six or eight years before. Fourteen years later, in 1908, the demand had increased so that it became necessary to move to more commodious quarters, and the old engraving building of the Company was selected, the printing office and its component parts occupying the entire upper floor, one-half of the lower floor, and a wooden storehouse near by. Here the capacity of the office was rapidly increased. A ruling machine and bookbindery were installed, and in December, 1911, a large amount of new material was added, enabling the Company to do its entire printing, emboss-



AMORY MILL

ing, ruling and binding, the department giving employment to over fifty persons. It is now one of the best equipped printing offices, according to its size, in the country. The stock is taken in the blank sheets, and not only printed, but ruled, bound, embossed, and the titles of books stamped in gold leaf. In every section is the latest and best made machinery that can be obtained. The lower floor is devoted entirely to color work, such as bands for finished cloth, pattern cards and tags. This work all bears the Amoskeag monogram in black, red and gold. There are two of the largest size Miehle cylinder presses, one of them with a two-color attachment, and the other connected to a bronzing machine, both equipped with United Printing Machinery Company's automatic feeders. Two embossing machines, one of them of the largest size manufactured, are in use, together with two Colt's Armory presses, two bronzing machines and a 50-inch Oswego paper cutter. On the top floor, besides the ruling and bookbinding machinery, are ten job presses, a Miehle pony cylinder and a 38-inch paper cutter. This book is a specimen of its plain printing and binding, while there is no work too intricate or delicate for it to undertake.

March 18, 1912, the Company made the proposition to sell to any employee of five years' service, a lot of land fifty by one hundred feet in a section lying between Coolidge Avenue and Rock Rimmon Park. There were the usual restrictions, which have been such a benefit to the city in the end, limiting the house to be built to two tenements. A first and second mortgage for one-half of the price of the land was a consideration, and should the house be built within one year, the notes were to remain without interest so long as the mortgagor was in the employ of the Company, and at the end of five years,

should the mortgagor continue in its employ and occupy the house, the second mortgage to be surrendered for one dollar. At the end of ten years under similar conditions, the first mortgage to be surrendered for the same minor consideration. Already many persons have availed themselves of this generous offer.

CHAPTER XI

INCIDENTS OF INTEREST

IN a business as vast and diversified as that of the Amoskeag Manufacturing Company a thousand and one difficulties and complications arise that cannot even be mentioned in an outline of its history.

From its incorporation, in 1831, the Amoskeag Manufacturing Company has believed in a liberal policy towards all. This has been shown in the favorable terms upon which land has been sold, in the generous treatment accorded the city, of which it was the god-father, wherever and whenever any public improvement was designed. To an even more marked degree has this generous spirit been displayed towards employees. The operatives have understood this fact and appreciated the consideration from the beginning. Thus the mills have been the Mecca for those seeking employment of that kind, so there is not a manufacturing concern having a more intelligent type of working men and women than the great crowds that pass and repass the gates every working day in the year.

Altogether the city, the employees and the Company are far more fortunate in this respect than in most other manufacturing places.

Extra inducements have been held out to make the positions as permanent as possible. Courteous treatment on the part of the overseers has added materially to the good

faith between employer and employee. Another reason is the wise forethought of offering the operatives tenements at low rates, considering the comforts and accommodations. The houses are well ventilated, have good sanitary conditions, modern improvements, and what is of fully as much importance, as far as it is possible, the privacy of life in cottage homes has been secured. Not more than three families, and often but two, are compelled to enter at the same door. There is, too, every opportunity for the deserving workman to rise above his beginning, while he may lay aside for some future day a snug sum with which to begin life in another calling if he chooses.

The Amoskeag Manufacturing Company has further shown its inclination to unite its interest with that of its employees by offering to hold for any person in its employ from one to twenty shares of preferred stock, to be taken up by semi-monthly payments from their wages, or by cash payments as the purchaser may prefer. It has been well said that "In its offering stock to its employees in this way the Amoskeag Manufacturing Company is in a certain sense developing a general plan followed by some of the best corporations throughout the country to interest the people themselves personally in the company they are working for. The terms upon which this stock is offered, however, are especially liberal and will undoubtedly be taken advantage of by many men and women."

Another trait worthy of comment is the position in regard to the employment of children. As child labor is most available in mills, where the work is done by machinery, it becomes a temptation to the struggling parent, or the orphan without assistance, to turn hither for an opportunity to earn a livelihood. The laws of the state are fortunately directed to protect the young during the years of growth and school life.

The Company has always been ready to assist in this protection of youth, so there is a smaller percentage of children employed than is usually found in other mills.

The preceding facts explain the absence of those labor troubles which have existed in many localities. The Amoskeag Manufacturing Company has experienced but one unpleasantness of that kind to attract the attention. On Monday afternoon, February 15, 1886, the gingham weavers in Mills Nos. 7, 8, and 9, to the number of one hundred, expressed their dissatisfaction with the new schedule of prices given them and abandoned their work. Previously there had been a reduction in the prices, and certain of the operatives claimed the recent new rate fixed did not restore the old scale, though in some other classes it had. The first open indication of disapproval appeared in the room over which Silas C. Stetson, Mill No. 9, was overseer. A committee representing the weavers waited upon him and stated their reasons and intentions. He replied that Agent Straw was out of town, and if they would wait until to-morrow the matter should be laid before him for consideration. This did not satisfy them and they left the mill. Others afterwards joined them, and the situation began to look serious. Indignation meetings were held by the strikers and committees chosen to confer with Agent Straw. The latter was firm, but stated that they should have fair treatment. The strike was started largely through outside influence, and without the sanction or even the knowledge of the local branch of Knights of Labor. Finally this body was appealed to, and through the judicious intercession of the officers of the supreme body an amicable settlement was secured, and the operatives returned to work Friday, March 5, after eighteen days of vexatious idleness.

It can be said to the credit of the strikers that no lawlessness occurred, and that general good conduct prevailed. The adjustment secured proved satisfactory to all concerned.

The only other labor trouble or disturbance of any magnitude that has taken place, began outside of the Amoskeag Company. On March 20, 1855, a considerable portion of the help in the Manchester Mills refused to work because of a change of regulation regarding the time of beginning work in the morning, causing an increase of half-an-hour in a day's labor. The original number of strikers gradually increased and for ten days the dissatisfied laborers paraded the streets with band and banners and held mass meetings. The dissatisfaction spread, until more than half the machinery in the Stark and Amoskeag mills was idle. Then feeling became so intense and the excitement so great that dire forebodings were predicted. Fortunately the advice of sober-minded leaders and citizens prevailed, and inside of two weeks the operatives went back to work.

It is interesting to glance at the time tables of the mills since their incorporation, and we are speaking of the Amoskeag Company now. Prior to September 20, 1849, the operatives began work at 6.30 A. M., and worked until 7.30 P. M., with thirty-five minutes for nooning. From that date to October 3, 1853, forty-five minutes were allowed for dinner. Then a new time-table was arranged to begin work at 6.45 A. M. and to stop at 6 o'clock P. M., with an hour for the noonday meal, making the day practically ten hours long. March 20, 1855, another change was made to comply with the following hours : to begin work at 6.15 A.M. continue until 12 o'clock noon ; have forty-five minutes for dinner and ring out at seven P. M. This was the schedule that caused

dissatisfaction, but it was continued for about ten years, when an hour was allowed for nooning, 12 to 1 o'clock, and closing at 6.45 instead of 7 P. M., with dismissal on Saturday at four o'clock P. M. May 31, 1898, the summer schedule was fixed from 6.10 o'clock A. M. to 12 M.; 1 to 6 o'clock P. M., with half-day holiday Saturday afternoon. September 25, 1899, the winter schedule was from 6.40 A. M. to 6 o'clock P. M., with half-day off Saturday. The present time, which went into effect July 10, 1905, is from 6.30 A. M., to 12 M.; 1 to 6 P. M., with Saturday afternoons off, making the 58 hours schedule for a week. The 55 hour law goes into effect January 1st, 1914.

In those days when the operatives worked thirteen hours a day, it was necessary to resort to artificial lights for more than a third part of the time in the winter season. At first lard oil in the old-fashioned tin "petticoat lamp" was used, and the light from this was so dim that it had to be set under the looms in order to see the work. Lard oil was eventually succeeded by a "burning fluid," made by a combination of alcohol and turpentine. This gave way to illuminating gas, which was installed in January, 1851, according to a contract with the Manchester Gas Company for five years. Since the invention of arc lamp and incandescent light this has been gradually superseded by electricity.

In the early days of manufacture not only were the days long, but the remuneration was necessarily low. A girl who could average one dollar a day was envied by the majority of her associates, who considered themselves fortunate if they saved \$2.50 a week above their board and room rent, which averaged about two dollars. It will be noticed that expenses were correspondingly on a scale with wages, while the desire

for the luxuries of life had not been cultivated. All dressed very plainly, and only pennies were parted with for knick-knacks. Girls then ran two looms each, as a rule, though on extraordinary occasions they would run four.

At the same period above mentioned the men were getting equally as meagre wages. A third hand received one dollar a day; a second-hand, twenty-five cents more. The overseers, fortunate fellows! were paid \$2.50 a day. One of these had to look after 150 to 160 looms. In the Amoskeag mills now, the overseer has charge of from five hundred to a thousand looms.

The first Irish operative to work in Manchester came here from Lowell in 1840, to begin her task in Stark Mill, No. 1. Hitherto the help had been all native born. It was several years later before the first French went to work in the mills. This seems to have been near the close of the civil war. The Germans came in a body in the early 70's.

Successful operators of any plan or industry usually attract the attention of imitators and would-be followers. As early as 1849, in order to protect their interest in the trade mark "A C A" tickings, the Amoskeag Company brought suit against certain parties in New York City, who had been using a label very closely resembling theirs. The Company's was an oval ticket, red in color, and surrounded by an elaborate vignette; within the oval and a little below the centre were the letters "A C A" in large capitals. Above the talismanic letters were the words, "Amoskeag Manufacturing Company;" below, the legend, "Amoskeag Falls, N. H." The New York parties boldly adopted the leading features, while over the three letters they had placed "Lowell Premium Ticking," and below the inscription were the words, "Warranted Indigo Blue."



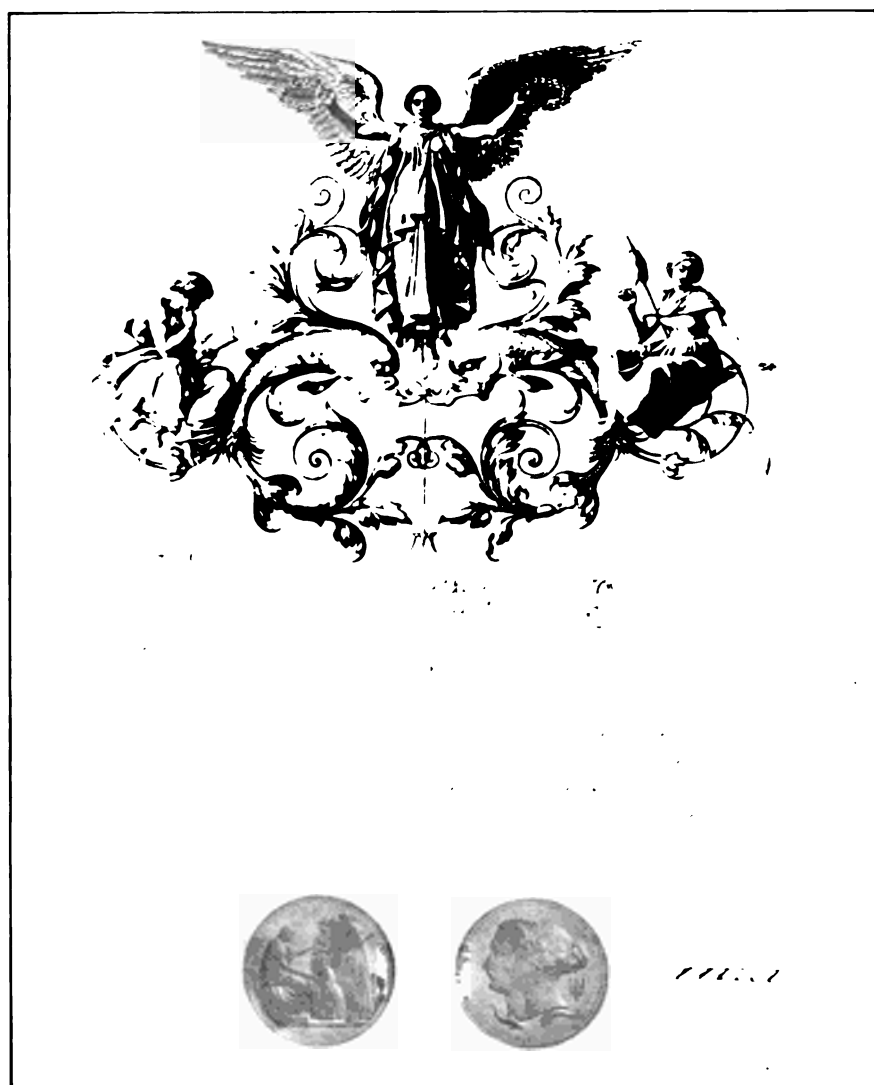
AWARDED AT LONDON, 1851

for the luxuries of life had not been cultivated. All dressed very plainly, and only pennies were parted with for knick-knacks. Girls then ran two looms each, as a rule, though on extraordinary occasions they would run four.

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MEDAL AWARDED AT LONDON, 1851

Upon investigation it was found that the goods were not made in Lowell, but by another manufacturing company, who sold them to the defendants in the suit. The court failed to sustain the Amoskeag Company in their sole right to the trade mark, though the objectionable goods were soon after withdrawn from the market.

At the World's Fair, held in London in 1851, the new corporation invited criticism of manufacturers abroad by sending specimens of their fabrics, flannels, sheetings, tickings and denims, to the leading commercial mart of Great Britain. The surprise and chagrin of the Old World manufacturers may be imagined, when the award of the first and only prize was given to the Amoskeag Manufacturing Company. The real significance of the honor is greater because the jury chosen to act in the matter consisted of one-half Englishmen, with only one American and the others from different European nations. The medal was made of bronze, a little over two inches in diameter, and one fourth of an inch thick. Since then the Company has won many medals at international expositions and fairs, and secured world-wide recognition for the quality of their goods; but it is safe to say that no honor thus obtained has afforded deeper satisfaction to the receivers than this one by the founders.

The main output at that time, as it always has been since, consisted of cotton goods in various forms, many of them excellent imitations of the finest linens in pattern and finish. The mills have also put upon the market, colored and white domestic goods, tickings, denims and stripes, sheetings and fancy napped goods, chevots or fancy shirtings, gingham, and dress fabrics in various colors and styles, which have stood the test of the most critical buyers. Special plans and experiments

have been perfected to secure lasting qualities for the dyes used in the manufacture of its goods, until the Company has succeeded in obtaining colors in its gingham that are absolutely non-fading, a fact that is widely appreciated.

Considering the great number of help employed and the varied operations carried on under almost every conceivable situation, very few accidents have occurred, and no great calamity has ever come to the Company's works. No fire of consequence has started in its own mills, and few lives, compared to the great number of persons engaged in the pursuit of manufacture, have been lost in carrying out the undertaking.

Twenty minutes before one o'clock on Sunday morning, July 15, 1855, while the watchman on the Manchester corporation was passing through the card room of Mill No. 1, the lamp fell from his lantern and rolled into a pile of roping. Instantly the flames caught upon the combustible material and the man soon found that he would be unable to extinguish the fire alone, so he gave the alarm; but before help could reach the scene the ceiling was all ablaze. The firemen made a gallant fight to subdue the flames, but it was not until four o'clock that they succeeded. About one-half the length of the building was burned and the machinery of that section, comprising about one-fourth of that in the entire manufactory. The loss was estimated at \$240,000, which was largely covered by insurance. Connection was made by the fire engine with Amoskeag Mill No. 5.

At three o'clock, before this fire had been brought under control, a man on the roof of the mill announced that a building was in flames between Manchester and Hanover Streets. This fire spread rapidly, and in spite of all that could be done to check it, the territory between Hanover and Manchester

Streets, and from Elm Street on the west to about half the distance to Chestnut Street on the east was burned over, with some damage to buildings on the south of Manchester Street. The fire in July, 1870, destroyed the buildings on this same section, excepting the row on Elm Street, and extended eastward to Chestnut Street.

The most disastrous accident that has ever occurred in the long career of manufacturing at the Amoskeag Mills took place about 9.30 o'clock A. M., Thursday, October 15, 1891, when the cast-iron fly-wheel of a pair of large 36-inch double Corliss engines, together indicating two thousand horse power, burst, killing the engineer, Samuel J. Bunker, and two women, Mrs. Ada L. Cram and Miss Mary Kane, while several other persons were quite severely injured. The fly-wheel was thirty feet in diameter, weighed 68 tons, and furnished power through three belts for Mills Nos. 4, 5, 7 and 8.

From the investigation that followed no blame was attached to the engineer or the Company. The former had been in the employ of the mills for ten years, and was highly esteemed by his companions and the officials. The following report of the coroner's jury explains more fully the situation :

*Verdict of the Coroner's Jury, appointed to inquire into
the cause of the explosion of the thirty-foot fly-wheel
of the Amoskeag Manufacturing Company's
Mills, October 15, 1891. State of
New Hampshire.*

Hillsborough ss.:

An inquisition taken at Manchester in said county, the 15th day of October, 1891, before Harrison D. Lord, one of the coroners of said county, upon view of the bodies of Samuel J. Bunker, Ada L. Cram and Mary Kane, there lying dead,

by the oaths of Jacob F. James, a justice of the peace for the said state, and of Nehemiah S. Bean and James P. Tuttle, who, being sworn and charged to inquire for the state, when, how, and by what means, the said Samuel J. Bunker, Ada L. Cram, and Mary Kane came to their deaths, upon their oaths do say that said deceased came to their deaths on the 15th day of October, 1891, from injuries caused by the explosion of a thirty-foot fly-wheel when in operation in the engine room located upon the premises of the Amoskeag Manufacturing Company in said Manchester, between No. 4 and 5 mills, so called, and near the east end of the bridge leading across the Merrimack river to the boiler houses of said company.

Careful and thorough examinations were made of the condition and location of the fragments of the exploded fly-wheel, the engines by which it was driven, the guages registering the pressure of the steam for its engines, the wheel pit in which it was driven, and the jack-pulleys and shafts to which it transmitted power. An extended examination of witnesses was made to learn the condition on the day of the explosion of the power and speed of the machinery belted from the jack-shafts both to the north and to the south, or in the mills of Nos. 7 and 8 above, and the Canal building, so called; and Nos. 4 and 5 below the engine room.

The opinions of men qualified by long study and experience, and eminent in their several callings, were taken.

Reliable tests of the tensile strength of both the fly-wheel and jack-pulleys were caused to be made.

Repeated experiments were made to determine the highest speed at which it was possible to run the looms in No. 7 mill.

The testimony of all persons who could aid was received and considered. From the mass of evidence before the jury the following facts clearly appear:

1. That in 1883 the Amoskeag Manufacturing Company purchased the fly-wheel and its engines from the Corliss Steam Engine Company of Providence, R. I., and erected

them upon its plant in the position occupied at the time of the explosion, obtaining what at the time was supposed to be, and what, so far as human ingenuity could discover, was a first class and perfect machine in every particular.

2. That the fly-wheel, when at work, had been run at a normal speed of sixty to sixty-one revolutions per minute, and was running at a speed of sixty-one revolutions per minute on the morning of and up to within a few minutes of the explosion.

3. That the engine was working under a steam pressure of ninety-five pounds to the square inch, and was connected with a light water power, which could not, under the conditions, materially increase its speed.

4. That it was carrying a load of from 1900 to 1950 horse power.

5. That its power transmitted by a 24-inch belt running west to a jack-pulley, whose shaft ran north and drove the machinery in mills No. 7 and 8; and by two 42-inch belts running east to two jack-pulleys whose shafts ran south and drove the machinery in the canal building and in mills Nos. 4 and 5.

6. That just before the explosion the speed of the machinery driven by the shaft running south suddenly went down, and in consequence the work was thrown off, thus relieving the engine of its load to the extent of about 1500 horse power; at nearly the same instant the speed of the looms driven by the shaft running north suddenly went up, causing all the looms, with a single exception, to stop, thus further relieving the engine of its load to about 300 horse power. The one loom excepted continued to run at an increasing speed up to within two or three seconds of the explosion.

7. That the explosion occurred at about 20 minutes past 9 o'clock A. M., on the day mentioned.

8. That at the instant of the explosion one of the throttle valves on the engine was entirely closed, and the other

was closed to within 1-32 of an inch. This condition of the valves cut off the entire steam power from the engine.

9. The difference of the speed of the machinery in the mills north from that in the mills at the south shows that there must have been a slipping of the main belts to some extent. They could not, however, have slipped to a great extent without causing a screeching, of which there is no evidence.

10. The high speed attained on the looms at the north further shows that the governor of the engine was not so sensitive for the moment and did not control the engine so quickly and perfectly as it should have done.

11. The alignment of the jack-shaft running north of the jack-shaft running south was not perfect, either with the shaft of the fly-wheel or with each other. To overcome these differences in alignment, guide pulleys were used. Belt guides were also used to prevent overlapping. These appliances had done perfect and satisfactory work without change for a series of years, and were in good condition, and were working properly a few minutes prior to the explosion.

12. That the fragments of the fly-wheel reveal countless internal defects in the castings, and many so serious and vital as to weaken their strength, and hence the strength of the fly-wheel at least fifty per cent.

13. That it is a physical impossibility for the one loom above mentioned (fact 6), under the most favorable conditions, to attain a speed above 180 picks per minute, and in a series of tests the average speed which it could attain was only 170 to 180 picks per minute.

14. That a speed of 180 picks per minute at the loom requires a speed of 76.2 revolutions per minute of the fly-wheel; a speed of 175 picks per minute at the loom requires a speed of 72 revolutions per minute at the fly-wheel.

15. That the speed of the fly-wheel at its bursting point could not have been above 77, and the evidence most strongly points to a speed of 75 or less.

16. That numerous fragments of the fly-wheel weighing

from 25 to 800 pounds each were found in the very bottom of the belt pit under the fragments of the jack-pulleys of the shaft running south, and a large piece of the fly-wheel, weighing several hundred pounds, was found deflected from its natural path and lying at the north end of the same jack-shaft.

17. That two of the deceased were at work in a building, the drawing-in room, so called, directly west of and in what proved to be the path of many fragments of the exploded wheel. That the likelihood of an explosion was so slight (this wheel having been in operation for eight years, and many others of nearly the same size and pattern for from ten to twenty years, and this being the first large fly-wheel to explode when at work), that their positions were not more hazardous than very many others in or out of a manufacturing establishment.

18. That there was no fault or neglect on the part of any operative of the company, while the conduct of the deceased engineer and of his assistant was singularly brave and meritorious. In the face of what they must have known to be danger they did their whole duty; the one died at his post, the other escaped death only by little less than a miracle.

Two theories of the primary cause of the explosion have been advanced.

1. The centrifugal force due to the fly-wheel's running over speed to the extent of about twenty per cent. of its normal speed, at which increase of speed had it been a sound casting it would have been absolutely safe.

2. The difference in the alignment of the shafting (fact 11), causing the following assumed procession of events.

(a) That the south 42-inch belt ran to the north and came in contact with its belt box.

(b) That this contact developed sufficient friction to set the belt box on fire.

(c) That the fire impaired the belt, causing it to break, and threw the whole load of the shaft running south upon the north 42-inch belt.

(d) That this sudden load crushed the north jack-pulley,

and its belt coming in contact with the jagged ends of the arms stripped the same clean from the hub, and threw an enormous, unequal strain upon the fly-wheel.

(e) That this strain in connection with the shock caused by the broken south belt wedging down between the floor and the belt pit shattered the wheel.

The jury have inspected the ruins several times with great care and have reviewed and weighed the evidence offered in support of each theory advanced. The conclusion in respect to "theory 2" is that the procession of events there set forth did not occur, for the following reasons:

(a) The belt guide rendered it absolutely impossible for the belt to come in contact with its box.

(b) There is no evidence of any portion of any belt or any part of the woodwork having been burned by fire.

(c) There is no evidence that the south belt broke prior to the explosion of the fly-wheel.

(d) The finding of the fragments of the fly-wheel upon the very bottom of the belt pit beneath the fragments of the jack-pulleys (fact 16) shows conclusively that the fly-wheel broke first. There was no other object than the jack-pulley itself by which the fragment mentioned could possibly have been deflected (fact 16) to the position in which it was found.

(e) No evidence was found, either in the condition of the belt indicating a "wedging down" of the belt "between the floor and the belt pit." In fact, all the evidence by inspection and by testimony goes to prove that such condition did not occur.

The conclusion in respect to "theory 1" is that it is well founded and as nearly correct as language can well express a cause in which from the nature of the case there are some things which cannot be measured with precision. This theory of the primary cause of the explosion is strengthened by the fact that it is the only theory in harmony with the series of facts stated, and especially the only theory in harmony with the particular facts, 6, 8, 12, 13, 14, and 16. For if the wheel in its imper-

fect condition (fact 12) continued to run and retain its integrity up to a speed of 72 to 75 revolutions per minute, one throttle valve at the instant of bursting being entirely closed, and the other closed within 1-32 of an inch, thus cutting off the entire steam power (fact 8), it must appear even to the prejudiced mind that had the fly-wheel been sound or nearly so it would have retained its integrity, have come to rest, and no explosion under the conditions proven could have occurred. Facts 6 (last sentence), 13 and 14, clearly demonstrate that the wheel could not have had a speed of 77 revolutions per minute at its bursting point, and those even who advanced theory 2 frankly stated that in their opinion if the wheel exploded from centrifugal force alone at a speed of less than 80 revolutions per minute, the explosion was due to "some unwarrantable defect in the wheel." With every proven condition existing, save alone the internal defects in the fly-wheel castings, the jurors are satisfied that no explosion of the fly-wheel would have occurred, and, therefore, to those defects attribute the primary cause of its wreck and the loss of life consequent thereupon.

So the jurors aforesaid, on their oaths aforesaid, do say that said Samuel J. Bunker, Ada I. Cram and Mary Kane, in manner aforesaid, came to their deaths by accident and misfortune.

In witness thereof the said jurors have hereunto set their hands the day and year first above written.

(Signed)

JACOB F. JAMES,
NEHEMIAH S. BEAN,
JAMES P. TUTTLE,

Jurors.

In witness of all above written, the said coroner has hereunto set his hand and seal the same day and year.

(Signed)

HARRISON D. LORD,
Coroner.

[L. S.]

After the explosion this fly-wheel was replaced by what is probably the largest wooden pulley in the world. It is thirty feet in diameter, nine feet and one-fourth of an inch on the face, and twelve inches in thickness. It is made up of forty-four rings of western ash, each ring being in twelve sections, and each section secured by sixteen lag bolts, seven-sixteenths by four inches. Twenty thousand feet of the best lumber was used in the construction of the rim, and eighteen thousand lag screws, besides the bolts mentioned. There are two sets of twelve arms each, with a setting of twenty inches in breadth. Every part of this huge structure was built by the most thorough and skilful workmen under the supervision of the superintendent, Charles H. Manning, and from his designs. The work was done in the company's shops. The entire weight is over 104,000 pounds, while that of the iron wheel it displaced was 116,000 pounds.

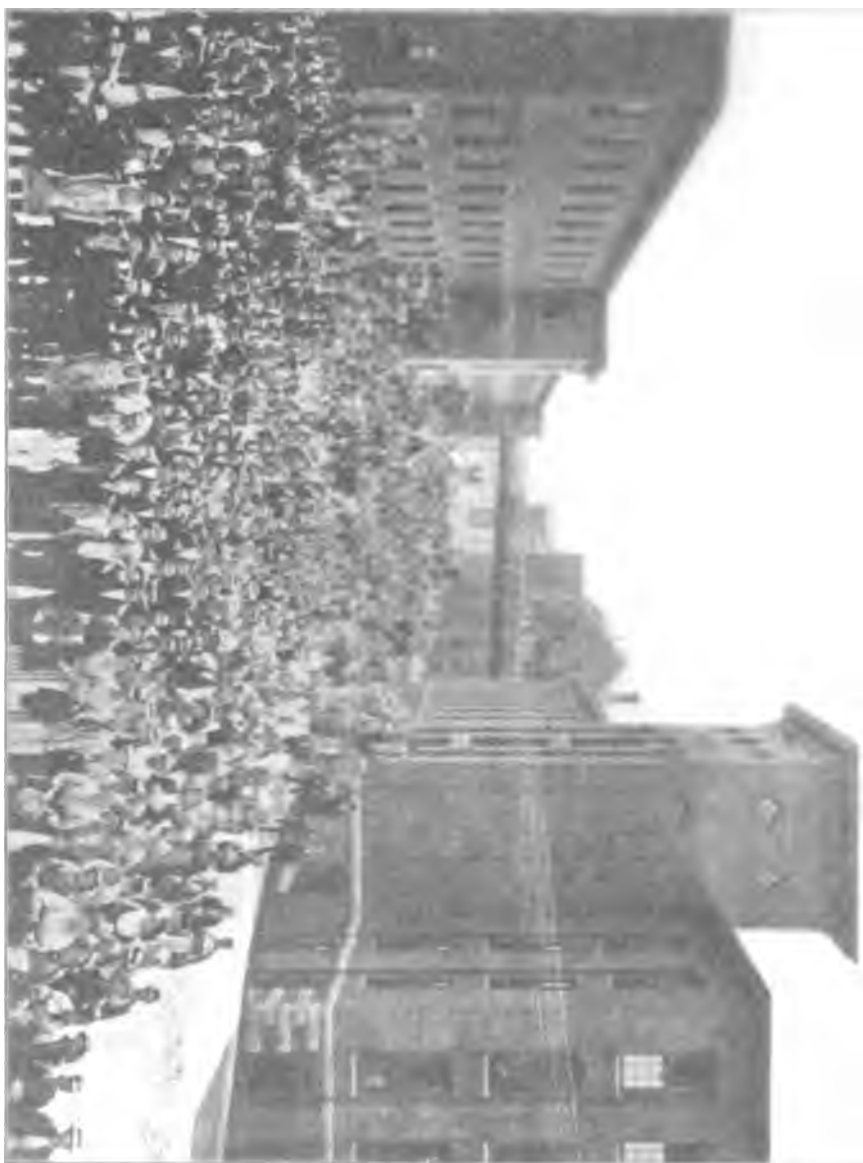
This was the engine where, two years before this accident occurred, the engineer, Mr. William Venable, was caught and horribly mangled between the fly-wheel and the pit.

The annual meeting of the stockholders, held October 1, 1890, came at the same time the manufacturers of Pawtucket, R. I., were celebrating the centennial of the introduction of cotton manufacturing by power into this country, mainly through the efforts of the young machinist, Samuel Slater, and the following resolution was read and unanimously adopted :

To HON. HENRY E. TIEPKE,

Chairman Cotton Centenary,
Pawtucket, R. I.

On motion of Judge Clark, the oldest director the Amoskeag Manufacturing Company, at their sixtieth annual



OLD TIME MILL YARD SCENE

On the occasion of this explosion this fly-wheel was replaced by what is now the largest wooden pulley in the world. It is thirty feet in diameter, nine feet and one-fourth of an inch in thickness. It is made up of twelve rings of western ash, each ring being in twelve sections secured by sixteen lag bolts, seven inches in diameter. Twenty thousand feet of the best white pine was used in the construction of the rim, and eighteen thousand feet of oak, besides the bolts mentioned. There are twelve spokes, twelve arms each, with a setting of twenty inches in length. Every part of this huge structure was built by the most expert and skilful workmen under the supervision of the superintendent, Charles H. Manning, and from his designs. The work was done in the company's shops. The entire weight of the wooden wheel is 40,000 pounds, while that of the iron wheel which it replaced was 160,000 pounds.

It was in the engine where, two years before this accident occurred, the engineer, Mr. William Venable, was caught as he was passing between the fly-wheel and the pit.

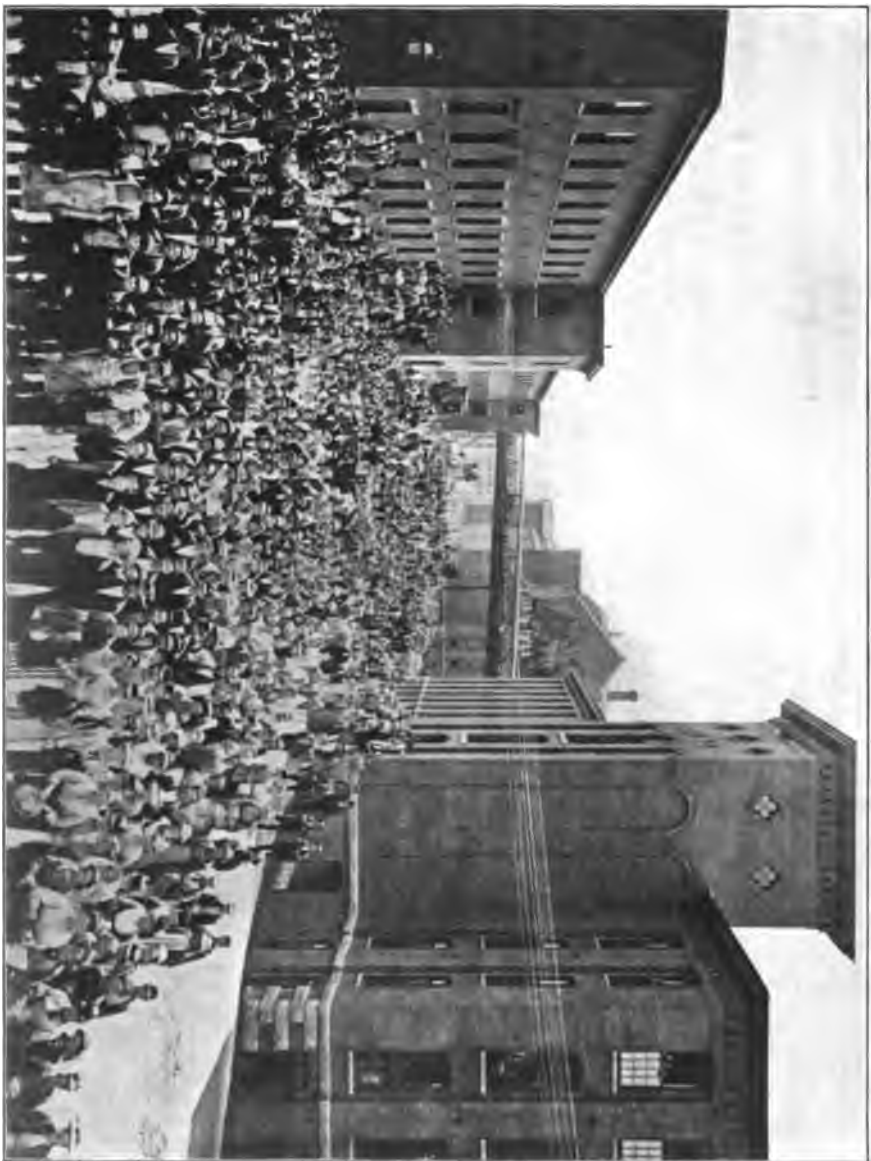
At the annual meeting of the stockholders, held October 18, 1890, at the same time the manufacturers of Pawtucket, R. I., were celebrating the centennial of the introduction of cotton manufacturing by power into this country, mainly through the efforts of the young machinist, Samuel Slater, and the following resolution was read and unanimously adopted:

To HON. HENRY E. TIEPKE,

Chairman Cotton Centenary,

Pawtucket, R. I.

On motion of Judge Clark, the oldest director of Amoskeag Manufacturing Company, at their sixtieth an-



OLD TIME MILL YARD SCENE

meeting, send greetings in remembrance of Samuel Slater, who was one of the original incorporators, July 13, 1831.

(Signed)

T. JEFFERSON COOLIDGE,
Treasurer.

During the Civil War the company loaned the government money to the amount of \$348,000.

The importance of the Manchester industries was also shown in the spring of 1861, when the Manchester Print Works had an order from the government for four thousand dozen of our "National Flags" of the following sizes; 60 by 108 inches; 18 by 36 inches; 18 by 24 inches; 12 by 18 inches; 9 by 12 inches. These flags were printed in fast colors, with 13 stripes and 34 stars. This company was prepared to print any size desired, and filled this order with satisfaction.

Difficulty with land owners along the river on account of flowage began in 1856, when the Company paid Daniel Farmer, December 26, \$1,500 for damage from overflow of the river and for privilege of raising the dam. More or less litigation with one and another followed through the years until in March, 1901, the court, after a long-contested case with Quincy Shirley, settled, as it is believed for all time, that the deeds of the Company gave the right to maintain flash-boards, and those who felt aggrieved by such action were enjoined from removing them. In some instances annuities were allowed in compensation for damages, when immediate settlement could not be made. In one case these sums paid thus amounted to \$1,500 a year during the lifetime of the claimant.

From the preceding descriptions the reader can realize something of the scope and extent of the work of these busy hives of industry. But he sees only with the mind's eye. Who

stands upon the hilltop and gazes down upon the extensive panorama of country unfolded to his view, gets a general idea of the scene, a summarizing, as it were, of the varied beauties and grandeur of the landscape. He comprehends, as he may believe, the wealth and greatness of the scene. But he who walks the aisles of the forest, who sees at close range each feature, comes to fully realize that the one grand attraction was but the blending of many, any part of which may have been greater than the whole system seen at a distance.

It is so with such a combination of industries and achievements as we have been describing. Who stands on Rock Rimmon can get a good general idea of the vast array of brick walls, the shops, the mills, the dwellings, the river rolling between; but while he may be impressed with the magnitude of the sight, he goes away with an inadequate comprehension of what it all means. To get this true and complete understanding, he must make a trip through the different departments, a trip that will equal any ever taken through some mimic wonderland, with the advantage that this is very real, not the embodiment, but the reality of the genius of labor.

Surely the prophecy of Hon. Samuel Blodget, and the anticipations of the founders of the Amoskeag Manufacturing Company, have been fully realized. In a little over three-fourths of a century have been built up the largest manufacturing firm in the world, and a municipality of over 75,000 inhabitants, a city that holds high rank among the leading industrial centers as the Manchester of America.

CHAPTER XII.

NOTABLE VISITORS

THE main avenue leading to the mills and machine shops passes over the bridge spanning the upper canal at the foot of Stark street, and leads past the north end of the building in which are located the counting rooms, the plainest and most unpretentious of all the structures. Over this bridge have passed and repassed since 1841 tens and tens of thousands of men and women, young and old, who have helped to swell the great majority of working people. All races and classes have entered here, representatives of every part of the civilized world. Along the same pathway trod by the multitudes have passed notables among men, makers of fortunes, rulers of nations, philosophers and philanthropists, and at least two who have fallen martyrs to the cause of higher humanity.

Naturally, so important a factor in the business world as the Amoskeag Manufacturing Company should be frequently visited by the representatives of the leading organizations of industry and by important persons. The list is too long to admit of more than a cursory mention of a few of these examples.

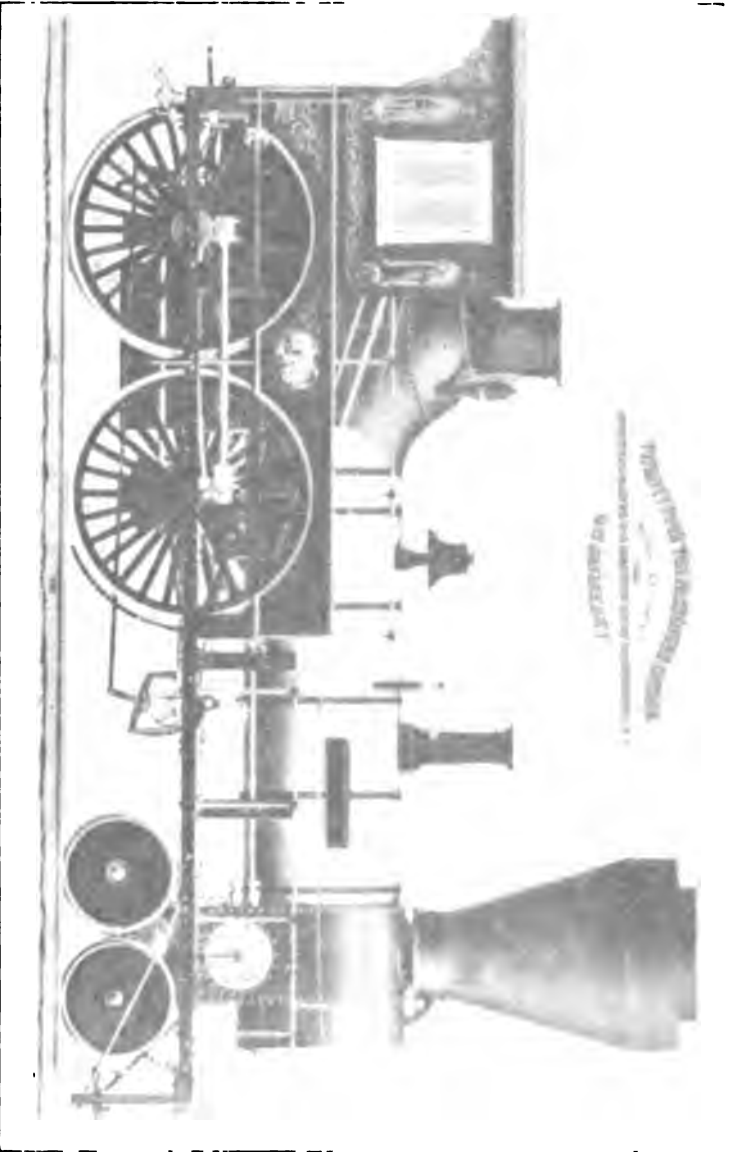
At least fourteen of the Presidents of the United States have visited, or been in the State of New Hampshire, during their terms of office, while several others have been here either before or after their services in that high capacity. Nine paid official visits to the State: Washington, October 31 and

November 4, 1789; Monroe, July 12 to 21, 1817; Jackson, June 28 to July 2, 1833; Polk, July 1, 1847; Grant, August 25, 1869; Hayes, August 24, 1877; Harrison, August 14, 1889; Roosevelt, August 28-30, 1902; Taft, March 19, 1912. Besides these, certainly five others were in the State during their terms of office. Of these, one, Pierce, was a native and resident of the State. Cleveland became a summer resident in New Hampshire after he had served his two terms as President. Lincoln was here during the exciting campaign which led to his election.

\ Now, 1913, President Wilson has taken up his summer residence at Cornish, N. H., so the little country town has become, in a way, the temporary capital of the nation.

The above-named, in their tours of New England, looked upon our manufactories with especial interest. Of the nine first mentioned all but two, Washington and Monroe, visited Manchester, while most assuredly President Pierce was in the city and the mills during his incumbency. President Cleveland made a brief tarry at the station, while en route to his summer home, appearing at the car platform and speaking a few words to the spectators.

President Monroe, in his tour during the summer of 1817, passed through New Hampshire from Newburyport to Portland, Me., stopping an hour at Amesbury, Mass., to view the woolen factories in that town. He left Salem, Mass., on the morning of July 12, and reached Portsmouth, N. H., on the evening of the same day. July 18, he left Dover, N. H., on his return from Portland, and rode overland by stage to Concord, which he reached at nightfall. From Concord, the President and suite went to Lebanon, and then to Hanover, by this route failing to pass through Manchester, which at that time



PASSENGER ENGINE

was closely associated with the bustling little factory village of Amoskeag.

President Jackson, the hero of New Orleans, and at the height of his glory at the time, was the first Chief Executive of our country to come within the territory of Manchester and to visit the mills at Amoskeag. He left Lowell, Mass., on the 27th of June, 1833, where it was boasted that, after having visited the factories, he rode for a mile between two rows of mill girls standing side by side, greeting him with plaudits and flowers. He came through Londonderry, stopping over night at Bell Tavern, afterwards re-named in his honor as "Jackson's Hall." The President traveled in a beautiful barouche drawn by four milk-white horses, driven by his negro coachman, dark enough to contrast in a high degree with the snowy appearance of the team. Following the old road from Londonderry to the Falls, he passed through what is now the heart of the city, but which then was little more than the heart of a wilderness. Crossing the Merrimack River by Amoskeag bridge, since re-named McGregor bridge, and which at that time had recently undergone repairs, he reached the factory village on the west side before noon.

Stopping at Amoskeag tavern, he inspected Bell mill, and was no doubt pleased with the evidence of prosperity. This was June 28, 1833, when the Amoskeag Manufacturing Company lacked but three days of being two years old, as an incorporated body. President Jackson, a southern man, was particularly interested in the development of cotton manufacture, then in its crucial period, and he visited all of the mills on his route. Meeting Mr. Slater, whom he frankly called the "father of American manufactures," the following characteristic conversation ensued:

"I understand you showed us how to spin, as they do in Great Britain, by the eternal, in spite of them," said the President. "You set all these spindles in motion, which are giving employment to thousands, so that we may become an industrious people?"

"If it please thee, sir, I suppose I did give out the psalm, and they have been singing to the tune ever since."

"We are glad you have not lost by it."

"Very true," replied Mr. Slater, in his slow, thoughtful way, "I should not like to be a pauper in this country, where the poor are put up at auction to the lowest bidder."

If this version of the route taken by Jackson is true, and we have good evidence that it is, the President may have stopped at the old tavern on his return, as he came down the old stage road from Concord to Amherst and thence to Nashua, where he was received with great acclaim, and an elm tree standing at the corner of Temple and Amory streets was given his name. During that period at least five stage lines passed through what is now Manchester, all converging at the Hooksett tavern. At one time, it is claimed, four coaches went over the Concord and Nashua route daily.

President Polk paid a flying visit to New Hampshire July 1, 1847, but he did not make a tour of the city, then a year old, or the mills. He was met at the station by a committee from the aldermen and council, with Hon. Mace Moulton, who knew the President personally, acting as spokesman. Contrary to his intention, the President spoke briefly to the assembled crowd from the platform of the car. It is interesting to know that a future President, James Buchanan, at that time Secretary of State, was among the guests who stopped here briefly, and then went on to Concord, where the legislature was in session.

The most noteworthy of all the visitors was Lincoln, and his was the most memorable visit. He came to Manchester as the invited guest of Hon. E. A. Straw during the great political campaign of 1860, and just previous to his election as President of the United States. He reached town in the afternoon and that evening gave an address in Smyth's opera house, which was filled to overflowing. The following morning he accepted an invitation to visit the mills, and Agent Straw then sent for a young machinist to escort his illustrious guest through the various departments. The young man ordered to do this, without any premonition of what was to follow, was Edwin P. Richardson, and we will let him tell the story in his own words:

"Thinking I was simply wanted to make some repairs about the machinery, I did not take the trouble to change my clothes or even to wash my begrimed face and hands. Judge, then, of my surprise upon entering the private office, of seeing an extremely tall and rugged man standing before me, the very speaker I had listened to the evening before with so much interest. Mr. Straw introduced him to me, but when Mr. Lincoln held out one of his great hands to clasp mine, I shrank back, saying in a tone that I know could not have been entirely free from tremor:

"'My hands are hardly fit to take yours, Mr. Lincoln, so——'"

"'Young man, the hand of honest toil is never too grimy for Abe Lincoln to clasp.'"

"You may rest assured it was a good, long, hearty grip that he gave me, until I felt my hand ache under the pressure of his mighty grasp.

"'Ed,' said Mr. Straw, 'you will show Mr. Lincoln over

the mills, and explain anything he may wish to know about them.'"

"Again I hesitated, stammering :

" 'I shall be only too glad to do so, if Mr. Lincoln will but wait until I can wash up and change my clothes.' Fixing those large, mournful eyes upon me, the future President said in a tone that was not to be misunderstood :

" 'Young man, go just as you are.'"

"The memory of the two hours that followed will never be forgotten by me. Mr. Lincoln seemed very much surprised and pleased at the work we were doing, and I found him an enjoyable companion."

President Ulysses S. Grant passed through the State in the summer of 1869, and made a brief tarry in this city, stopping here an hour and twenty minutes. As short as was his stay, he did not fail to examine those industries which have been the source of Manchester's growth and prosperity. The illustrious visitor and his suite, accompanied by Mayor Smith, Ex-Governor Smyth, William Amory, treasurer, and E. A. Straw, agent of the Company, and others, passed through the yards of the Manchester, Amoskeag and Stark mills, the guests everywhere pleased with the sight. As usual, the operatives were allowed to suspend work, and in long lines outside, in throngs at the windows, doorways, and in every available corner, appeared in great numbers. Upon leaving the mills the entire company was taken over the main streets of the city, led by the mounted police, and followed by twenty carriages containing notable citizens and officials.

President Rutherford B. Hayes, accompanied by the members of his cabinet, visited Manchester on Friday, August 24, 1877, and a part of the program was an inspection of the

manufactories of the city. The machinery of the mills had been stopped, and as the visitors passed the long lines of spectators, cheers reverberated along the brick walls and rose on the summer air like pæans of old. At times the procession passed an archway overhung with the national colors stretched from building to building, and all along the course a forest of flags, streamers, and holiday attire was in evidence. The distinguished concourse marched down Granite street from the station to the Print Works yard gate, and through the yards of the Manchester, Amoskeag and Stark mills to Canal street, thence up Spring to Elm street. As the line passed along, the bells rang and the spectators cheered. Nothing occurred to mar the pleasure of the occasion, and the visitors went away with acknowledgments of surprise at the volume of business accomplished.

President Benjamin Harrison came to Manchester from his visit to Maine, under an escort that met him at Portsmouth, and which consisted of ex-Governors Person C. Cheney, Moody Currier, Frederick Smyth, and James Weston, U. S. Senator Henry W. Blair, Herman F. Straw, agent of Amoskeag Mills; Stephen N. Bourne, of the Stark; Col. Benjamin C. Dean, of the Print Works; and William E. Winsor, of the Amory, with several other distinguished gentlemen.

Though it was a rainy day, there was an outdoor review which lasted an hour, and it was estimated there were 25,000 people on the streets. The President was the personal guest of ex-Governor Cheney. During the evening there was a display of fireworks. The following morning the President was driven through the mill yards, over Amoskeag bridge, and down the west side, returning over Granite bridge in season to take the 10.45 train for Concord.

President Theodore Roosevelt on August 22, 1902, gave "40 minutes," lengthened to one hour, to Manchester. The train arrived at the station at 9.30 A. M., and the President and his suite were taken about the city in the vicinity of the mills, the route being westerly by Granite to North Main street; up this street to the "Flat-iron," through McGregor to Amory street, and across McGregor bridge to Elm street; thence to Merrimack Common, and at the close of brief exercises there in respect to the Spanish War veterans, back to the depot. It was indeed a flying trip, but everywhere the illustrious guest was greeted with smiling faces, and nowhere were these more conspicuous than at the mill windows. The Amoskeag joined in the music of the occasion with a band of its own.

President William H. Taft also paid a "flying visit" to New Hampshire in March, 1912, and on the 19th he stopped in Manchester, where he was received with an ovation creditable to his high position. Among the vast crowds that thronged the main streets were 12,000 school children, to pay him homage.

It should be said that Mr. Taft had paid a visit to our city before he was elected to his high office, and February 19, 1908, after having spoken to a large audience and been feted, he was taken by Agent H. F. Straw to the Amoskeag Mills, where he devoted an hour to inspecting and going over the manufacturing buildings, following which he took the train for Nashua. During the political campaign of 1912 he again visited the State, but but did not stop in Manchester.

One of the most noteworthy visits by distinguished bodies was that of the Pan-American Conference, October 8, 1889. This party was composed of representatives from Mexico and the South American republics, accompanied by prominent dele-

gates representing this country, among whom was Hon. T. Jefferson Coolidge, treasurer of the Amoskeag Manufacturing Company, who had been appointed New England Commissioner for the United States by President Harrison.

The reception committee from the mills consisted of the several agents of the local corporations, Herman F. Straw of the Amoskeag, Col. Benjamin C. Dean of the Manchester Print Works, Charles D. McDuffie of the Manchester Mills, Stephen N. Bourne of the Stark Manufacturing Company, and William E. Winsor of the Amory Manufacturing Company.

The guests were taken in carriages from the cars and escorted through the various departments of the manufactories. But the crowning feature of the occasion was the splendid exhibit of textile fabrics, which occupied the south half of the Amoskeag's new mill Number 11, the other half of the building being devoted to an elaborate banquet. The amount and variety of goods shown to the members of the congress and to the public, which was invited to attend, was a source of wonder to all. The display included between three and four thousand pieces of goods from the Amoskeag Manufacturing Company, covering their staples and fancy styles. These comprised 250 patterns of spring cantons, a large assortment of Zanzibar cloths, twelve different designs of denims, as many grades of tickings, seventy patterns of garnitures and upholsteries, fifty patterns of nap cheviots, one hundred plaid and striped shirtings, fifty patterns of excelsior stripes and checks, twenty-two grades of flannels, and an assortment of mariners' stripes. The display of Manchester Mills, Manchester Print Works, Stark, Amory and Langdon Mills, Everett Knitting Works, A. P. Olzendam Hosiery Company, were varied and attractive. The Corey Needle Works made an exhibition of its pro-

ductions, while the Amoskeag Paper Company exhibited the different grades of paper made at its mills. The P. C. Cheney Company gave an interesting exhibit of the process of changing a tree into paper stock.

The most remarkable thing about the textile exhibits was the fact that every six hours, on each of the corporations represented, an amount of cloth was being made equal to the amount displayed. The Boston Herald, in speaking of the exhibition, said:

"Manchester grasped the situation and met the peculiar want of the party of South American tourists in an admirable way not equalled by any other industrial centre. The process of manufacture, although necessarily of great interest to those intelligent visitors, was not the main object of their investigations. It was the manufactured article, its quality, its desirability and the price for which they can sell it."

The Boston Globe said with equal pertinence October 9, 1889:

"At ten o'clock the company commenced to assemble at the Amoskeag Company's new west side mill, on the upper floor of which nearly fifty thousand square feet had been utilized in one of the most marvelous displays of textile fabrics ever shown on this continent."

The Manchester, N. H., Mirror under same date, said:

"In the great new building of the Amoskeag Mills, not yet fully ready for its use as a manufactory, a regular exposition of the products of Manchester has been instituted at the instigation of Hon. T. Jefferson Coolidge and by the united body of manufacturers."

CHAPTER XIII

THE AMOSKEAG TEXTILE CLUB

FEW are the years in the history of the Amoskeag Manufacturing Company which are not marked by some milestone of progress; some innovation or work that stands out distinctively as evidence of the continual watchfulness and advancement of its managers. In this respect the year 1911 marks the beginning of a movement towards a better understanding and appreciation of the condition and relation between employers and employees. It was inaugurated by the formation of the Amoskeag Textile Club, which, gradually broadening and deepening in its scope, has become today one of the strongest and clearest exponents of its class to be found in the country.

The formation of the club was perfected under the most felicitous circumstances that can be imagined. A summer outing to Hampton Beach was planned and carried into effect upon Saturday, August 13, 1910, over 350 employees attending. A local paper in describing the affair opens by saying: "The outing was a most auspicious occasion, and from start to finish the affair was a complete success; there not being an incident to mar the pleasure of the day."

Leaving Manchester at 12.30 o'clock, and going by five special cars from Exeter, the destination was reached at 4.30, the company repairing immediately to the spacious banquet hall in the Casino building, where a delicious banquet was served

by efficient caterers, 355 sitting down to the tables. Each member of the party wore an old rose badge of Amoskeag gingham, upon which was inscribed, the name, date and the monogram of the corporation. At each cover was a handsome souvenir booklet in olive green covers, with the name and date of the outing inscribed in letters of gilt. Besides the menu the little book contained pictures of Amoskeag Falls, a general view of the Amoskeag mills, pictures of No. 8 engine room, the east side of mill No. 11, the Jefferson and Amory mills, and the Coolidge mill, as well as an interesting collection of statistics and scraps of history relating to the founding and expansion of the Company.

Manley H. Varney, who had been chosen to act as toastmaster, opened the way for speech-making, during which all of the speakers favored the formation of such a club as had been talked of for several years, and it was the unanimous opinion that the auspicious moment had come for the culmination of this purpose. A vote being taken it was unanimously approved and a committee of five was appointed by the chair to bring in a list of officers for the proposed club. This committee consisted of R. S. Nelson, E. S. Stratton, C. M. Baker, J. L. Mitchell and Gen. Henry A. Farrington. This committee reported, and it was voted that the following officers serve as officials of the club: President, William Parker Straw; first vice-president, William B. McKay; second vice-president, Manley H. Varney; third vice-president, George N. Manning; secretary, Alfred K. Hobbs; treasurer, John W. Rowley; directors, Perry H. Dow, Frank M. Kellogg, Harry E. Blanchard, Herbert E. Richardson, Wilfred Lemay, Charles Healey, Charles H. Whitten, F. E. Jewett, Herbert A. Salls, T. G. Biron, John Hering, Frank L. Clarke,

Albert M. Thompson, Harry I. Crocker. In accepting his office President Straw expressed his pleasure in becoming the first president of the club and outlined a most auspicious plan of action for the new organization.

The Textile Club continued to increase in membership and a broadening of the work interpreted by its original founders. Meetings and outings followed, where athletics abounded and social festivities prevailed, until it was thought advisable to become an incorporated body. Accordingly a legal adviser was called into consultation and articles of incorporation were filed with the clerk of the city of Manchester and secretary of state of New Hampshire on June 28, 1912. The incorporators were William Parker Straw, Alfred K. Hobbs, Manley H. Varney, John W. Rowley, Forrister E. Jewett, Herbert E. Richardson, James M. Yuill, George N. Manning, Charles H. Whitten, Herbert A. Salls, William B. McKay and Perry H. Dow.

The objects of the club, as set forth in the articles of incorporation, are: "To advance the acquaintanceship of the employees of the Amoskeag Manufacturing Company with each other; to provide social recreation and amusement for its members; to promote athletics and healthy sports; to purchase, lease and otherwise acquire, deal in, and otherwise dispose of, any and all real and personal estate and other property and things whatsoever deemed necessary or convenient for the prosecution and carrying on of the business of the corporation, and the carrying out of the objects for which it is established, and to have and to exercise all the rights, powers and privileges appertaining to corporations under the general laws of New Hampshire."

At this time the membership of the club numbered over

four hundred, whose sentiments voiced the inspiring words of their president when he declared that the organization must not depend upon any other power or influence, not even that of the Amoskeag Manufacturing Company, but upon its own strength, its own efforts, its own good-will, considering which its success or failure would belong to itself. With spirit the work went on broader in its scope, loftier in its purpose, greater in its results. Under this determination not only was there a Board of Governors, and a Board of Directors, but eleven different committees were chosen, as follows, with the names of the chairmen: Finance, Charles E. Chapman; Athletic, Charles F. Broughton; Lands and Buildings, Perry H. Dow; Membership, Herbert E. Richardson; Entertainment, Fred M. Caswell; Gun Club, Winthrop Parker; Agricultural, Frank R. Vose; Educational and Welfare Work, William K. Robbins; Ways and Means, Frank W. Garland; Music, Frank L. McBride; Boy Scouts, Frank L. Clarke.

One of the first moves was the publication of a semi-monthly paper as a medium to convey to the large and increasing membership the varied work of the club. The Amoskeag Bulletin appeared first, December 2, 1912, with William B. McKay, editor, and Manley H. Varney, associate editor. This is a sheet of from eight to sixteen pages, printed in an attractive manner, upon coated paper, illustrated, and filled with excellent matter of interest to the general reader as well as to those for whom it was specially designed.

In December 1912, the Club secured from the Company the control of Varick Park for the use of its members, and henceforth the place is to be known as Textile Field. As soon as the condition of the land permitted in the spring

of 1913 extensive alterations and improvements were made. The park was completely remodeled, new stands built and everything placed in excellent order. Nearly thirty thousand dollars were expended in transforming the park into one of the best to be found in New England, thus making it not only a credit to the Club but a great attraction to the city.

Textile Field is within one mile of the center of the city and less than half a mile from the Union Station. Street cars pass the main entrance, and, with spur tracks, are prepared to furnish ample transportation facilities. The fourteen thousand people who witnessed the dedication of the field on September 8, speak in no uncertain terms of its capacity. The grandstand of steel and brick construction will seat three thousand people in comfortable chairs, while the sixteen boxes add another hundred persons to this number. Bleachers to the right and left of the grandstand will seat 2,500, and on occasions of baseball games and track meets additional space to accommodate 5,000 people can be obtained. Even this is not the limit in case of football, so the field can be made to provide space for 10,000 to 12,000 persons with comfort, and in case of an extra call, as at the dedication of the grounds, a larger number than this.

Ample provisions for the care and comfort of the participants in the exercises have been made. Club rooms have been built at either end of the grandstand, and these contain hot and cold water, shower baths, lockers, toilets, benches and tables for a rubdown. These are reached by doors at the rear, while a passage from each leads direct to the players' pit. For the patrons, toilet rooms are provided under the grandstand, while every provision that can be is made to add to their welfare. All flooring is of cement, as are the pits for

the players, and every equipment is perfectly sanitary in its arrangement and construction. The approaches and exits from the grandstand are inclined cement paths.

Further improvements in the field are planned for in the future, so that it shall be the largest and finest resort of athletic sports in New England outside of Boston.

As soon as Textile Field was nearing the completion of the extensive improvements being made, elaborate preparations were begun to dedicate the new grounds with appropriate display and entertainment. Hon. Perry H. Dow, Manley H. Varney and Fred M. Caswell were chosen a committee to conduct the affair. On Monday, September 8, 1913, from noon until ten o'clock at night there was constant proof of the activity of the committee. By day the field was alive with games and athletic exercises, and by night resplendent with such a display of fireworks as Manchester has seldom, if ever, witnessed. The star feature of the afternoon was the great ball game between the Boston Red Sox and an all-star team from the local Manufacturers' league. In the evening there was a soccer football game. It was estimated that fully fifteen thousand persons were present.

In the summer of 1912 the Amoskeag Textile Club took possession and assumed the management of the Company's store on Canal Street, and this place is conducted after the manner of other mercantile concerns, except that the goods are bought from the Amoskeag Manufacturing Company and sold to its operatives at reduced prices. Worsted, as well as cotton goods are now handled and two salesmen are employed. There is every prospect that under the efficient management this department will enlarge its scope of business and become an interesting commercial center.

The Amoskeag Textile Club has been made the medium by which employees of the Company have been able to secure stock from the Company as has been described.

The Bulletin has well said that "The principal object in all forms of business is the search for efficiency. Our national government is at work upon this problem, and every large enterprise in the land is striving to create the highest degree of efficiency in the manufacture of all kinds of necessities, as well as the distribution of these commodities in the avenues of trade." The first step in this direction is education, the dissemination of knowledge along particular kinds of work and progress.

Thus that branch of the Textile Club known as the Textile School is instrumental of a large amount of good. Until this organization was effected, the employee in the mills, as well as in other occupations, was compelled to acquire slowly day by day the knowledge of his occupation. If he was keen of perception, applied himself assiduously to his task, or was favored by extraordinary circumstances, he was advanced from time to time, until he was at the head of some department. But the majority were forced to keep along without reaching the higher goal.

Under the new order of things this has been changed. While, as of yore, all cannot gain the height, if they wished, the knowledge to make his work clearer, easier and more successful has been given him. It has already been remarked that the Amoskeag Manufacturing Company has always employed a high class of labor, and the very fact makes it the more necessary to keep pace with the changing conditions of affairs. Where in former years the help employed was mainly from among the people at home, to-day the rank and

file of the employees are aliens from strange lands, who labor under many disadvantages unknown to those earlier employed. Thus this school instituted to train them in the practical efforts of a manufacturing life, not only assists the ambitious ones to rise to the heights, but enables all to overcome, in a measure, the drudgery of their work and lends to their usefulness and efficiency. The need of this departure has been clearly shown, and it is evident that it will broaden in its scope of action and increase in its sphere of usefulness. In every respect it has proven an excellent auxiliary to the city schools in the matter of education. The large number who have taken advantage of the opportunity have shown to its founders that they builded wisely and to a good purpose.

The efforts of the Textile Club are not confined to educational work, but the sports and athletic exercises inclined to develop and strengthen the body, and it is safe to say that the Amoskeag teams have records that reflect great credit upon their efforts.

In touch with these activities there have been organized four complete troops of Boy Scouts. A troop comprises twenty-four boys, divided into patrols of eight scouts. Each of these divisions is under the supervision of a scout master who has an assistant. One boy is selected from each patrol to act as scout leader. Early in the summer a camp was opened at the Recreation Grounds under the direction of a scout master. Each troop of scouts is sent to the grounds for one week, and in this way all of the troops are given the benefits of an outing during the season.

In 1910 the women clerks of the Amoskeag Company formed an association, under the name of the Amoskeag Lady Clerks' Club, and the first banquet was held at River-

side Inn, Hooksett, October 31 of that year. In 1912 it was thought advisable to reorganize this association on broader lines, and the first meeting under this plan was held January 6, 1913, when a list of officers was chosen, and the new organization was christened the Amoskeag Woman's Textile Club. The board of officers consisted of Annie M. Aldrich, president; Carrie I. Reid, Elizabeth G. Prah, Mary I. McIntyre, vice-presidents; Lenna B. McCoy, secretary; Grace E. Robbins, treasurer; Gertrude Swinston, auditor. The club has now a membership of four hundred and there is every reason to believe that it will do a good work.

CHAPTER XIV

FLOODS AND FRESHETS OF THE MERRIMACK

THE river is one of man's noblest allies in his scheme of industrial endeavor, when no disturbing element enters into its downward flight. But not always does it submit to the will of its would-be master. Like a human being it has its varying moods, its stormy, as well as its peaceful periods. So if our river moves today with placid grandeur over the flashboards at Amoskeag Falls, like a silver band unrolled from an endless spool, only yesterday it flung its foaming torrents over those same rocks with a fury the power of man could not curb or his ingenuity pacify. Born of the mountain fastness, the child of storm and glacier, so far back in the misty past that the years cannot be counted, the Merrimack has portrayed many vivid pictures of the stormy phases of floods and freshets.

Including its tributaries, the Merrimack river drains a territory in New Hampshire and Massachusetts of nearly five thousand square miles, and forms one of the most important river basins in the United States. The density of its population is equalled only by the valleys of the Delaware and the Housatonic. The number of its inhabitants, according to the latest official returns, is approximately three-fourths of a million, or one hundred and fifty persons to a square mile. The water privileges amount to one hundred thousand horse power, of which more than one-half is in New Hampshire. It is claimed,

with what seems to be the truth, that its waterfalls turn more spindles, light more forge fires, swing more hammers, keep busy more hands of art and toil than any other river that runs to the sea.

Besides being a manufacturing district, the Merrimack valley is a beautiful agricultural country, and some of the finest homesteads in New England, in the world for that matter, have been developed from the clearings of the pioneers of one hundred and fifty years. Not a few of these improvements have resulted from the money earned in the busy mills standing on the banks of its network of rivers. Especially was this true when the farmers' sons and daughters went into the factories to earn the money with which to improve their condition. The scenery of hills and valleys, lakes and mountains entwined with the streams like threads of silver in its warp of green, is not excelled for its natural attractions by any landscape upon the slopes of the great Appalachian range of highlands. And its chief attraction to-day, as it was in the period of primeval glory, is the red man's River of Broken Waters.

Without attempting an account of those floods of the rivers in the unrecorded days, freshets of which we can have no conception as to their volume or work of destruction, I will begin my record with the freshet of the winter of 1741, when the river rose to a fearful height and overflowed the banks below the falls so at least one house standing near the lower end of McNeil Street was endangered. An old account from an eyewitness says the spray from the rapids rose fully fifty feet into the air.

Severe rainstorms in January, 1770, October, 1785, and in March, 1801, each in their turn caused great floods

and freshets along the Merrimack, and the inhabitants living near the river suffered more or less damage. The first of these, Perley in his "Historic Storms," calls the greatest freshet perhaps that ever occurred in New England. But he wrote his account before the coming of a freshet I shall mention further along. All of these, of course, were before any mills other than sawmills had been built at Amoskeag.

At the time of the building of the old cotton mill at Amoskeag, on October 9, 1804, began one of the most singular storms that ever visited New England. On Tuesday morning, the 9th, the temperature fell about forty degrees, and a storm of rain and snow, accompanied by thunder and lightning, with a terrific wind, set in, lasting until Wednesday afternoon, the snow continuing to fall until Thursday morning. Over two feet of snow fell at Amoskeag, and was swept into drifts by the wind. The roads were blocked and business and travel were suspended. The temperature rose on Friday morning as quickly as it had fallen on Tuesday, and the snow, melting swiftly away, disappeared even quicker than it had come. The volume of water in the river, high at the outset, was increased to uncommon proportions. The appearance of the river, swollen by the flood, and its bank quickly strewn by the debris brought from upstream, was a warning to Mr. Prichard, who came to the Falls about this time, to select a site for his mill high enough to escape these floods. So great was the damage to the forests from this storm that acres in the Piscataquog valley were fairly stripped of all larger growth. In Massachusetts ship building was seriously affected.

A winter flood, reaching every river in New England, occurred in February, 1807, when the great bridge over the

Merrimack at Lawrence was washed away, and Amoskeag bridge was seriously damaged. A spring freshet in 1826, beginning with a warm rain on Friday evening, March 24, and lasting twelve hours, transformed the river into a swollen torrent and seriously threatened to submerge the Island Mill, which had been recently built.

July 24, also in 1826, following a cool spell, the thermometer was above ninety degrees for a week. This hot wave was succeeded by a rainstorm which lasted three days without any cessation, making one of the worst summer freshets known in New England. While the Merrimack was not affected to the extent of the Connecticut river, still a large amount of damage was done along its course, though nothing serious at Amoskeag.

The spring of 1839 witnessed the most disastrous freshet that had been known at Amoskeag to this date. The river rose so high that the water flowed over the island, and the people living there had to take refuge in the upper story of the boarding-house, which stood on the highest point of land. The dye-house was submerged, and the water made as blue as indigo. For twenty-four hours everybody expected the buildings would all be swept away, and there was fear and trembling in the groups of anxious watchers of the stormy scene. All but the stringers of Ben's bridge, by which the island was reached, was washed away, and the friends of those on the island were powerless to lend them assistance until the storm should abate. It was three days before those on the island could reach the mainland. The bridge was soon repaired and did service for about twenty years, when it became impassable, and its timbers fell into the stream and were carried away on the night of February 17, 1861.

The October gale of 1841, made famous in local annals by the poet Holmes, opened on the night of October 2nd, when snow began to fall in New Hampshire, and snow and rain in Massachusetts, a terrific gale of wind blowing in both places. Six inches of snow fell at Amoskeag, and the Merrimack flowed furiously over the dam. Amoskeag Mill No. 1 was then being built, and grave fears were entertained by its builders in regard to its foundation.

From 1848 to 1853 inclusive, prolonged storms of rain and snow prevailed frequently over New England, making the five years a period of freshets and floods, causing a great loss of property and many lives. No serious damage was done in this vicinity until the week of February 15 to 22, 1851. At the height of this freshet Granite bridge was destroyed, though more from the ice choking the river than from high water. The spring following the freshet, to accommodate the travelling public James McGregor established a ferry across the Merrimack, after obtaining permission of the Lock and Canal Company for a landing place on the east bank. Soon rival parties undertook to run opposition ferries to Mr. McGregor, and they built a landing below the latter's, and erected a high fence from the site of the bridge down to the Company's platform. Bitter feeling was engendered, and finally the matter was carried into the court, where it dragged until after the building of the new bridge and the traffic by ferry was over.

A severe rainstorm raging for five days, Tuesday, April 15, to Saturday the 19th, 1851, proved that the season of freshets was not ended. This spring storm wound up with a grand flourish of snow in this section, while along the Atlantic coast it was rain, hail and snow. This became historic as



AMOSKEOG FALLS

Photo by A. H. Nathan

"The Lighthouse Storm," from the fact that Minot's Ledge lighthouse succumbed to the tempest, and two young men lost their lives. There is no record of any particular damage in this vicinity. As if the elements had not spent their fury, a sudden rise in the temperature, accompanied by light rains, caused a freshet in the north country, lasting from April 20 to the 24th, 1851, though little harm was done along this section of the Merrimack.

On Friday, August 22, 1851, a furious thunder shower raged lower down the river, doing a great amount of damage in Medford and Malden, where it developed into the most violent and destructive tornado ever known in that vicinity. Huge volumes of rain fell at Lowell, considerable at Nashua, but the storm fell short of Manchester.

During the winter of 1851-1852 forty snow storms came, the last falling on the night of April 7, 1852, and the following morning a most beautiful picture was presented by the snow-laden trees upon which the spring sun played with uncommon brilliancy. Beginning on Monday, April 19, 1852, rain fell for four days, the river reaching its highest point at sunset on Thursday. Mr. Samuel B. Kidder, who was gatekeeper at the time, says "April 23, 1852, at four o'clock A. M., the river was the highest I ever knew it. The middle lock at the foundry completely covered by water. The balance levers only in sight. The water on the top of the gates twenty-one inches. This is the highest freshet we have had on the Merrimack for some seventy years."

Manchester Mills and Amoskeag No. 4 were shut down, and the buildings nearest the river partially submerged. Considerable damage was done to the dye house. Fortunately from Plymouth to Newburyport the river was clear of ice and

free of logs. Of the towns along the Merrimack, Haverhill and Lawrence suffered the most, and at the latter city the water flowed over the dam to the depth of ten feet, while the new bridge was partly carried away.

Following a previous freshet by less than two weeks, that of April 19-23, 1852, was memorable in the history of the Merrimack. This was not so much on account of the great damage done by the flood, but owing to the height reached by the water, which was higher than had been known for over eighty years, or since 1770. Snow lay to a great depth in the northern country, but as the rainstorm did not extend to that section in any considerable quantity, less harm was done along the river than would have been the case had a warmer temperature prevailed in that region. As it was, the Winnepesaukee branch of the Merrimack rose suddenly to a great height, and this flood augmented by the Contoocook, swollen to unusual proportions, made the river at Concord a broad sheet of water overflowing the intervalle, until a turbid stream reached from the high bluff upon the east to the railroad tracks on the west.

February 5 and 6, 1853, heavy rains fell, raising the Merrimack to dangerous heights. The ice was broken up, which, combined with the high water, destroyed two piers of the Amoskeag Falls bridge, rendering the structure impassable. No doubt the foundation of these piers had been seriously undermined by the freshets of the previous years. Two days before the storm set in the thermometer stood at two degrees below zero, but on Wednesday, the 16th, rain began to fall in torrents, and the river, choked with ice, began to rise rapidly.

March 18, 1859, the very flood-gates of the heavens seemed to have been suddenly opened, and for forty-eight

hours the rain fell in torrents. The temperature was warm, and the frozen flooring of the river was so broken up by the storm that it resulted in the worst ice freshet the oldest inhabitant could recall. By the time the weather had cleared the river below the falls was comparatively free of obstructions, but above, during Saturday night, great cargoes of ice were swept down in huge floes that threatened to carry everything before them. Sunday morning, March 20th, while the people were at church, the news was spread that the bridge at Hooksett had been carried off and was coming down the river amid the icy debris of the flood. A crowd gathered at Amoskeag to watch for the wreck, fearful that its coming meant the destruction of both dam and bridge there. The expected object came in sight about 2.30 o'clock in the afternoon, when excitement rose to a feverish pitch. An eyewitness, describing the scene, says: "The bridge came in sight in two pieces, looking in the distance, packed in among the floating ice, like two large ferryboats with 'monkey rails.' Suddenly one part took the current and went down the west side of the river, where the logs came from the boom, and the other took the east side, avoiding the main falls, and coming into the canal channel. As it came under the bridge it struck some boards with a crash, and at that moment a carriage came upon the bridge, and a woman mistaking the noise of the carriage for the sound of the departing bridge, screamed and ran, and the idea became general that the whole was going, and such a stampede, a rushing for *terra firma*!

"As the floating wreck struck the bridge it swung with the east side current and steered for the gate house, which seemed doomed to destruction for a few minutes. But the wreck, carried on like a helpless body, struck the high wall of the

canal, and again swinging at the mercy of the flood, after a brief suspension on the brink, plunged into the boiling abyss below, coming out only in shattered fragments to be soon lost to sight.

"The scene at Amoskeag Falls during the afternoon was grand beyond description. It seemed as if the river would run itself to death, and such a flood of water, ice, wood, timber, rushed by. Most of the underpinning of the gate house was knocked away. 'Ben's bridge' at the island was saved only by the ice that backed up from below."

During this freshet the Company's dam at Garvin's Falls was washed away. This was replaced in 1879 to hold the rights of this privilege.

A freshet during the early spring of 1861 did considerable damage along the Merrimack, the remains of Ben's bridge, which had fallen into disuse sometime before, was washed away at this time. A week of swollen river in 1869 created more or less excitement and misapprehension up and down the Merrimack valley, and then followed the more memorable freshet of 1870. On Monday, April 18, of this year, a furious rainstorm set in, lasting until Thursday afternoon. The water reached its highest point at midnight Wednesday, the 20th.

At this time Mr. S. B. Kidder had to revise his diary by saying that the water was two and one-half inches higher than he had ever known. January 30, 1839, Mr. Kidder and David A. Bunton "made nearly 50 marks on the trees by nails and in other ways, by which the height of the water could be compared at any future time." The dates of high water for the succeeding years of excessive rains was as follows: January 8, 1841; August 11, 1842; April 18,

1843; November 11, 1849; May 1, 1850; April 23, 1852; February 7, 1853; May 2, 1854; March 20, 1859; April, 1862.

During the freshet of 1870 the water flowed into the lower yard of the mills and submerged some of the basements. The machine shops at Mechanic's Row were quite drowned out. The river below Manchester was relatively higher than here. At Lawrence the water was only eight inches below the flood of 1852. The water guide in use by the Amoskeag Manufacturing Company showed the following record:

August 18, 1867, 75.100; March 20, 1868, 72.500; April 19, 1868, 72.800; May 29, 1868, 73.900; April 23, 1869, 79.375; October 5, 1869, 80.900; April 4, 1870, 77.550; April 20, 1870, 81.400.

What has been described as the worst freshet known in the history of Manchester began on Saturday evening, April 12, 1895, when the river increased rapidly in volume and turbulence. This rise continued with unabated fury through Sunday and Monday, the flood rushing over the top of the dam to a depth of ten feet and six inches. The meadows above the falls were filled so they presented the appearance of ponds. The Cygnet Club boat house was completely surrounded, and the water rose by the eddy on Front street, below the dam, until the thoroughfare was overflowed. The Daily Mirror of Tuesday, April 16, described the startling scene, viewed by thousands of anxious people, as "A grand and awful sight; one well calculated to inspire in the breast of the beholder an admiration for nature in its wildest form. The seething billows dashed furiously over the dam with a noise that was almost deafening, and broke with a crash against the rocks in the river bed below. The rocks were completely

hidden from view with the white caps, and all that could be seen of them was their shape which they showed in the waters. Now and then a stray log appeared on the scene and went over the dam, fell upon the rocks, was hidden from view awhile, and then reappeared only to be submerged again under another wave, but finally emerging in the distance triumphant after its fearful struggle."

All of the mills along the river were sufferers from this flood. The Cheney paper mills, just below the falls on the west bank near the site of the old Amoskeag cotton mill, were only saved from being washed away or seriously damaged by having a stone wall or breastwork hastily constructed to protect them.

The Jefferson of the Amoskeag mills fared the worst, the water entering the electric power plant, and it also entered the belt tower to a depth of eight feet. The steam bridge, through which was run the pipe carrying the power to some of the mills on this side, was in imminent danger of being swept away.

Fortunately, none of the bridges across the Merrimack were carried off, though all at this section were threatened with destruction. At the McGregor bridge the water rose to within a few feet of the underside of the structure. The Granite bridge was in still greater danger, the flood reaching the granite piers, and serious fears were entertained lest the whole structure should be swept away. The North Weare railroad bridge was in such peril that a heavy train of cars loaded with iron, stone and coal was run out near the middle as ballast to hold it down.

For forty-eight hours Manchester was completely cut off from communication with the outside world, as mails and



THE MANCHESTER PRINT WORKS.

MANCHESTER 1840

telegraphs were obstructed from all directions. The damage at other places along the Merrimack where there were manufacturing interests suffered equally with the mills here.

The following account of the rise and fall of the water from measurements taken during one day presents an interesting illustration of the situation :

At six o'clock Monday morning, April 15, the water flowed over the dam to the depth of seven feet, steadily rising through the day. At four P. M. the water had risen to 8.9 feet ; at 5 o'clock to 9.1 feet ; at six o'clock to 9.4 feet.

Rising more slowly the river reached high-water mark at 11 o'clock on Monday night, when the water was flowing ten feet and six inches over the dam. This exceeded the height of the water during the famous freshet of 1878, when it rose nine feet and four inches, or one foot and two inches less. It will also be noticed that no rain fell during this remarkable rise of the river, though it had been warm for several days before, and there had been light rains over northern New England. The flood was due to the sudden melting of the deep snow in mountain regions. The worry and excitement of the citizens of Manchester during this trying period was greatly increased by the report, coming when the river was at its worst, that the dam at Laconia had given away, and a huge drive of logs was being swept down the stream with all the other debris. For a time it seemed certain that the Merrimack would make a clean sweep from mountain to sea.

This freshet of 1895, as turbulent and disastrous as it proved, was outdone both in volume and violence within twelve months. A warm rainstorm, which prevailed throughout the greater portion of New England, and was especially severe in the Merrimack valley, began about noon Saturday, February

28, 1896. The rainfall continued with unceasing volume through Saturday afternoon and night, Sunday and Sunday night and Monday morning, lasting for almost forty hours, and then turned to snow. There was considerable snow on the ground at the beginning, and this had been quickly melted by the warm rain, which soon converted the brooks into rivers and the rivers into raging torrents.

The Merrimack rose rapidly, and huge cakes of ice choked and dammed the turgid waters at the falls. During a furious snowstorm Monday night the Merrimack reached the highest point that has ever been recorded. The story is best given in a few words and many figures :

Sunday, 6 A. M.	75.175
Monday, 6 A. M.	79.500
" 12 Noon	80.100
" 6 P. M.	80.850
" 7 P. M.	80.900
" 8 P. M.	80.900
" 9 P. M.	80.950
" 10 P. M.	80.950
" 12 Midnight	80.650
Tuesday, 6 A. M.	79.650
" 12 Noon	78.200

Fortunately most of the ice had gone down the stream during the lower water of Sunday, but this proved far more disastrous than the freshet of the year before. Still it is possible that the work of that storm had considerable to do with the damage done to the bridges and mill foundations destroyed at this time. At any rate, upon the clearing away of the storm, wreck and ruin was visible upon every hand.

The Piscataquog river rose to unprecedented volume, and the water at Kelly's Falls rose to eight and one-half feet, which was nearly three feet higher than in 1895. Sunday afternoon at two o'clock the dam was washed away, imperiling several lives. Fifty thousand feet of lumber was carried

down the stream at Wallace's mill, West Manchester. The Second street bridge was moved by a log jam, and North Weare railroad bridge was swerved from its foundations several inches.

The bridge across Black Brook was destroyed. The Amoskeag bridge had to be barricaded and was unsafe for passage until repaired.

The three private bridges owned by the Amoskeag Company were swept bodily away. The first pipe bridge went down during the forenoon of Monday, and the others at 5.50 in the afternoon of the same day. All the mills in the lower yard were flooded, and of course were shut down Monday.

The west span of Granite bridge went down at 8.10 Monday evening, and the west middle span twenty minutes later. Railroad traffic and passenger service were seriously crippled. Only two mails left Manchester on Monday, one going to Portsmouth, and the other north, to be stalled at Hooksett.

The view looking up the river from McGregor bridge during the height of the freshet was grand and awe-inspiring. The flood nearly reached to the sills of the old bridge, and the falls were fairly lost in the volume of rushing current. A wilder night than that of Tuesday was seldom, if ever, known in Manchester. The wind rushed and roared down the river-way as if the legions of old Boreas had been turned loose, while the waters rolled and tumbled with a fury beyond description. Few people were abroad and those hastened their steps homeward as quickly as possible. As well as being one of the most severe in history, this freshet raged over a wide extent of territory, covering all of New England, New York state, and all of Canada this side of the St. Lawrence river.

In connection with this brief story of the freshets, the following measurements of the amount of rainfall for different years reaching back over thirty years, as copied from the records kept at the engineer's office of the Amoskeag company, is interesting and seems worthy of space here :

RAINFALL AT AMOSKEAG		
Year.	Total Fall.	In Month of March
1880	26.00	0.68
1881	41.55	4.68
1882	36.55	2.99
1883	34.08	1.99
1884	40.60	4.53
1885	39.35	1.80
1886	37.94	3.12
1887	46.27	4.31
1888	48.09	5.63
1889	38.54	2.52
1890	44.50	6.00
1891	36.11	4.83
1892	35.23	2.80
1893	38.20	2.48
1894	27.90	1.19
1895	40.94	3.17
1896	36.35	6.97
1897	46.84	3.69
1898	46.05	1.37
1899	35.27	7.07
1900	46.91	5.55
1901	47.10	5.18
1902	48.32	6.18
1903	42.01	5.77
1904	36.14	2.11
1905	38.61	3.21
1906	43.34	4.92
1907	42.60	1.94
1908	34.07	2.51
1909	35.66	3.27
1910	31.63	1.55
1911	35.66	4.09

It will be noticed that years of freshets have not been noted for excessive amounts of rain during the four seasons, Usually they are the result of local disturbances either in the sudden downpouring of the elements or the melting of great bodies of snow. Like all rapid streams, the Merrimack has had its share of these floods and disasters.



FREDERICK C. MAINE.

In connection with this brief story of the freshets, the following measurements of the amount of rainfall for different years reaching back over thirty years, as copied from the records kept at the engineer's office of the Amoskeag company, is interesting and seems worthy of space here :

RAINFALL AT AMOSKEAG

	Total Fall.	In Month of May
1879	26.00	0.68
1880	41.55	4.68
1881	36.55	2.99
1882	34.08	1.99
1883	40.60	4.53
1884	34.35	1.80
1885	37.44	3.12
1886	46.27	4.31
1887	48.09	5.63
1888	48.54	2.52
1889	44.50	6.00
1890	36.11	4.83
1891	35.23	2.80
1892	42.20	2.48
1893	27.90	1.19
1894	40.94	3.17
1895	36.35	6.97
1896	46.84	3.69
1897	46.05	1.37
1898	35.27	7.07
1899	46.91	5.55
1900	47.10	5.18
1901	46.32	6.18
1902	42.01	5.77
1903	36.14	2.11
1904	38.61	3.21
1905	43.34	4.92
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It will be noticed that years of freshets have not been attended by excessive amounts of rain during the four seasons. Usually they are the result of local disturbances either in the sudden downpouring of the elements or the melting of great bodies of snow. Like all rapid streams, the Merrimack has had its share of these floods and disasters.



FREDERIC C. DUMAINE

CHAPTER XV

CAPTAINS OF INDUSTRY

WHERE so many have faithfully and zealously united in their efforts toward the success of the Amoskeag Manufacturing Company, it is difficult, if not impossible, to credit individuals with their personal share in the result. Three names, however, are conspicuous on the roll of honor. These, in the order of their succession, are: Dr. Oliver Dean, the leader of the little group of founders; William Amory, for nearly forty years the treasurer of the company; Gov. Ezekiel A. Straw, for over forty years the agent and local manager. Without casting any reflection on the good work accomplished by others, to this trio the company for its marvellous growth, and the city of Manchester for many benefits, owe a large measure of their success.

BENJAMIN PRICHARD

Not a little praise is due to those sturdy pioneers of cotton manufacture at Amoskeag, and foremost among them in boldness of venture, faith in the result, and priority of accomplishment, was Benjamin Prichard. He was the first man in New Hampshire to undertake cotton manufacturing on his own responsibility. If he fell short of the success he had expected, he builded better than he dreamed, and it was his plain, wooden mill that set in motion the wheels of manufacture at Amoskeag. That fact alone won for him an honorable niche in the history of the industry in northern New England.

The Prichard family, the name spelled in several ways as Pritchard, Prichet and Prichett, came to this country from Wales about 1640, settling in that part of old Rowley now belonging to Boxford, Mass. Paul, the first descendant of whom we have any connected account, was born in Rowley in 1721, but moved to Mason, N. H., before the Revolution. He was a prominent member on the Committee of Safety, and was active in helping on the cause of the colonists. Two of his sons were in the service. His wife, the mother of ten children, was Hannah Farley, whose ancestors had settled in the same community as the Prichards. She was a remarkable woman, skilled in the knowledge of herbs and midwifery, besides being a very strong person, capable, it is said, of doing the work of three ordinary individuals.

The children of this couple, all of whom were born in Rowley, except one, were noted for their size and sound constitutions. The ninth of this remarkable group of children was Benjamin, born in Rowley in 1769. He married in 1791 Patty Sherwin, of Townsend, Mass. As has been told elsewhere, he was employed to build the first cotton mill at New Ipswich, which must have been finished early in the year 1804, as the machinery was set in motion in the fall. It is possible it was completed, as far as Mr. Prichard was concerned, late in 1803. Let that be as it may, he was awakened to the possibility of cotton manufacture, and having considerable property, mostly in real estate, he resolved to build a mill of his own. There was no available power in his vicinity, and he looked farther away for his mill site. Amoskeag Falls was the most widely known water power of that day, and hither he seems to have come in the fall of 1804. Judge Blodget, with his unbounded faith in the future of the place, no doubt lent his assistance

toward establishing Mr. Prichard at Amoskeag. Judge Potter, in his *History of Manchester*, says that Mr. Prichard gave between four and five years to trying his hand at cotton manufacture at the Goffe place in Bedford, on a stream too small to afford power more than nine months out of the year. Every person who has written upon the subject has followed Judge Potter in this statement, unmindful of the fact that he corrects this error in his later writings. It does not seem reasonable that Mr. Prichard should have carried on his manufacturing in Bedford four years without paying taxes on his property. But there is no evidence that he ever paid a cent of tax in the town. On the other hand, he did begin to pay tax on his mill at Amoskeag in 1807.

According to this fact, he must have been at Amoskeag sometime before. With limited means, Mr. Prichard was obliged to move slowly, if not painfully, at first. He had to send to Pawtucket, R. I., for his machinery, which in those days required considerable time. He was but a beginner, and he must find orders upon which to work, so he could not have found very easy starting in 1805. In 1806 he sold most of his property—real estate—in New Ipswich, and paid his last tax in that town in 1807, the same year he began in Goffstown. No doubt in 1806 he had got into tangible shape. From this time on he was able to show others the possibilities of the business, and in 1809 he succeeded in interesting several men of means in his manufacture, as has been narrated in Chapter II. But those early years of trial and triumph show Mr. Prichard to have been a man of rugged determination and resource, and deserving of more praise than he has been accorded. Let us, then, honor his name, and remember the date of his beginning at Amoskeag

in 1804. When he finished his work at Amoskeag in 1811, he removed to Boscawen, where he lived the balance of his life a respected townsman.

SAMUEL SLATER

Samuel Slater, who has been justly styled the "Father of American Cotton Manufacture," was the second son of William Slater, of Belper, Derbyshire, Eng. He was born June 9, 1768, and had the advantage of a good education in the English branches, being especially apt in mathematics and mechanics. One Jedediah Strutt, engaged in cotton manufacture at Milford, Eng., applied to Mr. Slater to have his eldest son become an apprentice in his factory to learn the business. The elder Slater thereupon recommended his second son, Samuel, as better adapted to the position, remarking that he was "his mother's best boy to wind worsted, wrote a good hand, and was good at figures, as well as being a mechanical genius, having made a polished steel spindle to lighten the work of winding worsted."

Samuel was accepted and, immediately entering the service of his employer, he manifested great skill, industry and faithfulness in the discharge of his duties. He seems to have become early imbued with the idea of starting in business for himself. With rare foresight, he looked to the new country of America for the scene of his future industry. At that period an intense jealousy existed between the manufacturers of England and the would-be manufacturers of this country, so that every discovery or improvement in the manner of making fabrics in Great Britain was guarded with the utmost vigilance. Thus the pioneers of manufacture in New England were thrown almost entirely upon their own resources. With few experienced machinists and none of the advantages of making

machinery enjoyed in the older country, this placed the men of New England at a great disadvantage. In fact, they had not only to invent the machinery with which to accomplish their manufacturing, but they had to make the very tools by which these machines were evolved.

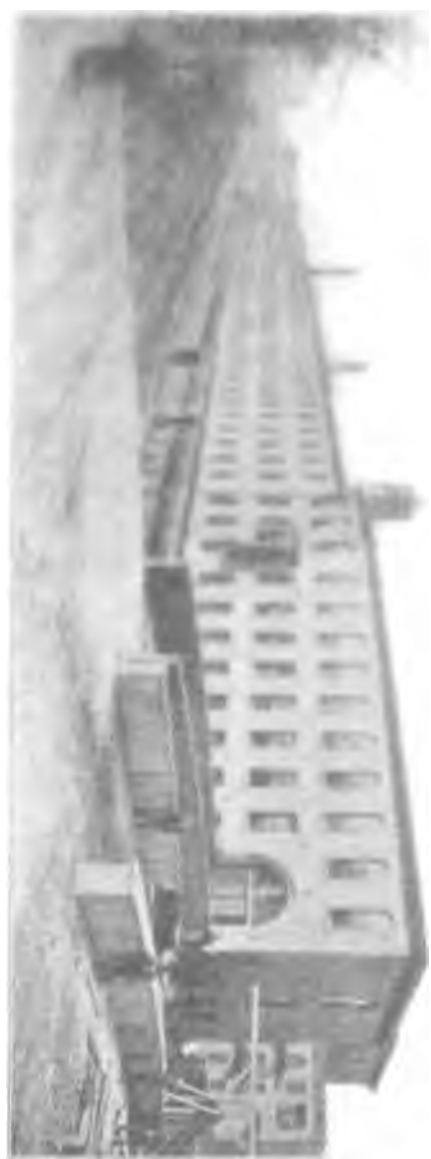
Samuel Slater, as young as he was, realized this, and before he should seek an opportunity there he resolved to master, if possible, the mysteries concerning cotton manufacturing machinery and its application. Animated by this purpose, without daring to let even his mother know what he was doing, he made himself familiar with every detail of the Arkwright system of manufacturing. Then, believing his time for seeking his fortune elsewhere had come, he disguised himself as a farmer's boy and engaged passage on a vessel bound to New York. This was on the morning of September 1, 1789, and he was in his 21st year.

After a wearisome voyage of sixty-six days, he landed in New York and found employment with the New York Manufacturing Society, an association which had been formed with the purpose of advancing the cause of cotton manufacture in the United States. But the enterprising young Englishman soon saw that a lack of proper water power was likely to make success here very uncertain. Hearing of the advantages to be secured in this respect at Pawtucket, the northern section of Providence, R. I., he wrote to a retired merchant there named Moses Brown. This gentleman was immediately interested, and he offered to furnish the means with which to introduce the Arkwright system of cotton manufacture. Young Slater was placed at the head of the new undertaking, and with his knowledge of machinery he began to put into effect the plans he had laid in England.

A firm styled Almy & Brown had already begun manufacture at Pawtucket under the old method, but had met with discouraging results. Hence Samuel Slater was gladly received into the company and offered all of the profits in the venture above interest on the cost of the mill providing he could repair the machinery and run it successfully. He went to Providence January 1, 1790. Upon investigation he decided that the old machinery could not be used with profit, so he immediately began work upon new patterns after the style of those in Strutt's mill. Desirable arrangements were made for the organization of a firm under the style of Almy, Brown & Slater, the first couple to furnish the capital and the last-named to superintend the equipment and operation of the factory. Thus the young mechanic, aided only by his memory and his constructive ability, finally established manufacturing in New England on a successful footing.

When his success was assured there, Mr. Slater gladly gave encouragement outside of Pawtucket. He was the supporter of Mr. Robbins at New Ipswich, and he also furnished the machinery for Mr. Prichard at Amoskeag. He assisted Mr. Olney Robinson in his enthusiastic efforts, furnishing at least one-half the money he called for. The Bell mill was a reproduction of Mr. Slater's earliest mill at Pawtucket, R. I. Samuel Slater, who belonged to the Society of Friends, was the founder of the Sunday school in America, his object being to improve the moral and social condition of the increasing class his development of manufacturing had created. He died April 21, 1835, lacking only a few weeks of being 87 years old.

Mr. Slater married Miss Hannah Wilkinson, a daughter of Oziel Wilkinson of Pawtucket, a member of the Society of



MANUFACTURING COMPANY

Almy & Brown had already begun manufacturing by the old method, but had met with failure. Samuel Slater was gladly received and secured all of the profits in the venture of the mill providing he could repair it successfully. He went to Providence for an investigation he decided that the mill could be used with profit, so he immediately made patterns after the style of those in England. The arrangements were made for the mill to be run under the style of Almy, Brown & Slater. Slater furnished the capital and the last-named firm managed the equipment and operation of the factory. Slater's knowledge was aided only by his memory and his experience in the already established manufacturing in New England.

When Slater was assured there, Mr. Slater gladly accepted the position outside of Pawtucket. He was the superintendent of the mill at New Ipswich, and he also furnished the capital for Mr. Prichard at Amoskeag. He assisted Mr. Prichard in his enthusiastic efforts, furnishing at times the money he called for. The Bell mill was a reproduction of Mr. Slater's earliest mill at Pawtucket, R. I. Samuel Slater, who belonged to the Society of Friends, was the founder of the Sunday school in America, his object being to improve the moral and social condition of the increasing class his development of manufacturing had created. He died April 21, 1835, lacking only a few weeks of being 87 years old.

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AMOSKEAG COUNTING ROOM

Friends and a skilled mechanic. To Mrs. Slater belongs the credit of first suggesting that cotton fibre would be a good substitute for linen, then in use for sewing purposes. To test it she twisted some of the cotton which had been spun on an ordinary spinning wheel, making a No. 20 two-ply thread. This proved stronger than linen, and from that day dates the beginning of the manufacture of cotton thread.

DR. OLIVER DEAN

Dr. Oliver Dean, to whom more than to any one else was due the success of the early manufacturing at Amoskeag, was born in Franklin, Mass., February 18, 1783. He was educated in the schools of his native town, taking a course in Latin at the Framingham Academy, and studying Greek with the Rev. John Crane, D. D., of Northbridge, Mass. He fitted himself for the practice of medicine with Dr. James Mann of Wrentham, Mass., and Dr. William Ingalls, of Boston. It does not appear that he took the degree of Doctor of Medicine, but he began the practice of a physician in Medway about 1806. Perhaps I should say that it was not the regular custom to confer the degree of medicine by any society or college in New England prior to 1811, except as an honorary degree to practitioners of eminence in their profession. The title of "Doctor" was usually conferred by courtesy. Physicians did, however, have credentials as members of the Massachusetts Medical Society when they had been in practice three years, and had proved that they were entitled to the same by their skill and training.

Dr. Dean removed to Boston in 1810, where he married the daughter of John Francoeur, a distinguished French nobleman of considerable wealth, who had been obliged to flee his country on account of political differences at home.

In 1812 Dr. Dean was back to Medway, where he enjoyed a lucrative practice until 1817, when he abandoned a medical career for a business life. This change was consummated through the influence of his brother-in-law, Mr. Lyman Tiffany, then agent of the cotton mills at Medway. Upon the resignation of the latter in 1819, Dr. Dean was appointed his successor. This position he held with marked success, until he was induced to come to Amoskeag in 1826. It was believed by the half-dozen astute men planning the upbuilding of manufacture at Amoskeag that greater opportunity would be secured than elsewhere, a dream that most certainly came true.

Dignified yet courteous, affable but firm in all of his business transactions, his interest and attention were not wholly confined to the manufacturing company of which he was the wise pilot. He was interested in everything likely to redound to the good of the new town springing into existence. His counsel was evident in whatever improvement was undertaken. He was a model farmer, as well as a business man, and found time in his busy years to improve the large farm formerly owned by Mr. McGregor, which he purchased soon after he came to Amoskeag. This he tilled with so much skill and good judgment that the old place, overgrown with bushes and brambles, came to blossom as the rose, and it was among the most productive in town. When the lengthening years warned him that it was time to lessen his cares, he retired to his home in Framingham, Mass., in 1834, where he lived nine years, when he removed to Boston. His residence in Boston continued until early in 1857, when he moved upon a farm in Franklin, Mass. December 2, 1850, he had purchased a part of the homestead of the distinguished divine, Nathaniel



DR. OLIVER DEAN

Emmons, D. D., and he lived the remainder of his life upon the place. His first wife, with whom he lived for over half a century, died October 27, 1866, and in 1868, he married Mrs. Louisa C. Hawes.

Always deeply interested in the education and welfare of youth, after removing to Franklin, he devoted himself chiefly to carrying out certain plans he had long entertained. The result was the establishment of the Dean Academy of that town, he giving the site of nine acres, with an endowment during his life of \$135,000, which was supplemented by his will with the additional gift of \$110,000.

Dr. Dean died December 5, 1871, and by his will gave to the Manchester, N. H., library a bequest of \$5,000, the income of which should be used for the purchase of books, and this has become designated as the Dean Fund. He was loved and respected by a wide circle of friends and acquaintances, retaining his sincere interest in manufacture at Amoskeag until the last.

WILLARD SAYLES

Willard Sayles, an active worker and investor in the Amoskeag Manufacturing Company in its early days, enjoyed the distinction of being exceedingly shrewd in making a bargain. Probably more to him than to any other person was due the large possession of land which came to be owned by the Company. Many stories illustrative of his keen practices in obtaining land are yet told. A prominent trait of his character was to secure a monopoly of whatever he undertook. The senior member of the Boston house of Sayles & Merriam, and a successful merchant, he was particularly well situated to carry out the ambitious projects in his energetic mind. He was one of the foremost in securing control of the water power

of the Merrimack, and he owned one-third, or twenty-four out of the seventy-two shares of the mills at Hooksett, valued at \$28,800. He was a director of the Amoskeag Manufacturing Company, and committee on land, until his death in 1847. He was born in Franklin, Mass., April 10, 1792, but his parents moved to Wrentham when he was a child, where he lived until 1821, when he went to Boston and entered into commercial pursuits in company with Lyman Tiffany. His first interest in manufacturing was at Medway, and then at Walpole, followed by his association with the up-building of the Amoskeag Manufacturing Company. His aggressive nature made a good complement to Dr. Dean's broader perspective of affairs. He left a large property for his day gained by a life of energy and enterprise.

IRA GAY

The Gays are an old and respected family in America. The first to come to New England, of whom there is any record, and who was a direct ancestor of him who was interested in manufacture at Amoskeag, was John Gay. With others he came from Great Britain in 1630, only ten years after the coming of the Pilgrims. The little party to which he belonged, followed up the Charles River, finally reaching the locality of the present town of Watertown, Mass. Later he and eighteen companions established a plantation they named "Contentment." This pioneer settlement has since developed into the town of Dedham, Mass.

Ira Gay was of the sixth generation in lineal descent from John the planter, and he was one of two sons of Ebenezer, who settled in Francetown, N. H. Upon reaching his majority, Ira and his brother Ziba went to Nashua, where they became interested in the construction of manufacturing machin-

ery. In this respect both were quite successful. Ira, coming in touch with affairs and men at Amoskeag, seems to have been one of the prime movers in the organization of a manufacturing company at Amoskeag. Though not a large stockholder, and never living at the scene of the industrial activities, he was an important factor in the development of manufacture at the Falls.

LYMAN TIFFANY

Lyman Tiffany, like all of his associates, came of an old English family. His ancestors came to New England at an early date, but the larger portion seem to have removed to Connecticut. The subject of this sketch first became engaged in manufacture in Norfolk, Mass., and was thus thrown into close business relations with the other manufacturers and merchants of his day, noticeably the houses of Sayles, Sears, Hitchcock, Pitcher, Murdock, Brown, Hempsted and others. Possessed of considerable means, a shrewd and experienced financier, he was a valuable member of the new firm at Amoskeag. A brother-in-law of Dr. Dean it was perfectly natural he should become interested in affairs there. In truth, so many of the families of manufacturers of that day had intermarried that they seemed almost like one large family.

LARNED PITCHER

Larned Pitcher was born in Great Britain and came to this country about 1800. He was interested in the mills at Rehoboth, Mass., near Pawtucket, R. I., being half owner in a mill with James S. Brown, under the firm name of Pitcher & Brown. He was a staunch friend of Samuel Slater, and it was through the latter's influence that he was interested financially at Amoskeag. He died in 1840.

ROBERT READ

Robert Read, the grandfather of the subject of this sketch, was among the early settlers of Litchfield, but moved to Amherst when he was a young man. He had a son named William, born in Amherst, who became a wealthy and respected citizen of that town. His second son was Robert, born October 24, 1786, and he received a good education for that time, but he was apprenticed to Messrs. Haller & Read, merchants, Chelmsford, Mass., before he became of age. Later he returned to Amherst, to enter into trade with his father under the firm name of William Read & Son. His father retiring after a few years, Robert formed a partnership with Isaac Spaulding, Esq., which continued until the latter removed to Nashua.

By this time the young merchant had become one of the leading men in town. He was chosen town clerk for twelve years, and he was elected to the state legislature in 1826, 1827 and 1828. With his other activities, he was associated with the West Company Infantry of Amherst, noted as one of the most efficient companies of militia in the state, which fact was due largely to his personal efforts. He served in all of the grades from private to command of the company. In 1828, Captain Read was appointed aide-de-camp to Governor John Bell, with the rank of Colonel.

Seven years later Colonel Read removed to Nashua, where an interest in manufacturing was being rapidly developed. He showed such aptitude in this direction that within two years, in 1837, he was tendered the position of Agent by the Amoskeag Manufacturing Company to succeed Mr. Hartshorn. He accepted this promising offer, and came at that crucial period when broader and more ambitious plans were being laid



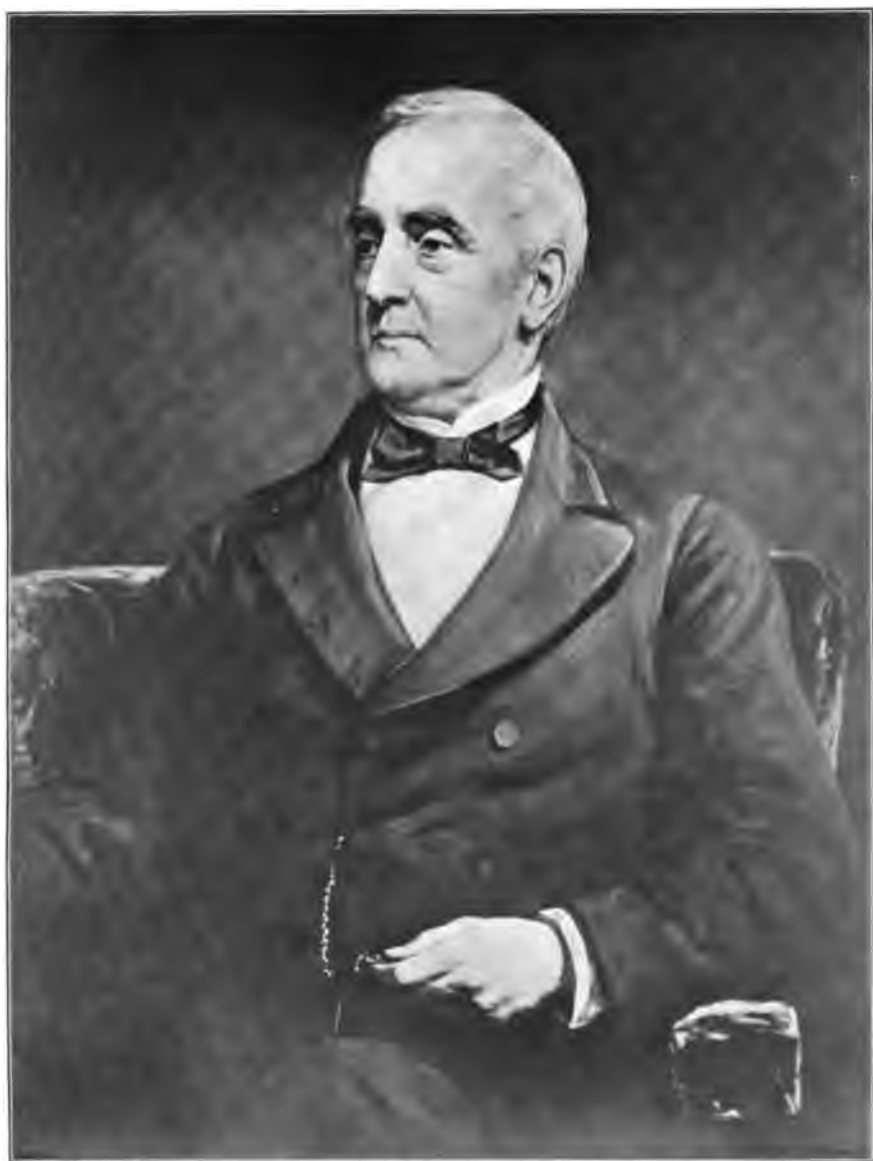
WILLIAM A. LLOYD

ROBERT READ

Robert Read, the grandfather of the subject of this sketch, was among the early settlers of Litchfield, Conn., when he was a young man. He was named William, born in Amherst, who became a well-known and respected citizen of that town. His second son, Robert, born October 24, 1766, and he received a liberal education for that time, but he was apprenticed to Ebenezer & Read, merchants, Chelmsford, Mass., before he came to Conn. Later he returned to Amherst, to enter the law with his father under the firm name of William R. Read. His father retiring after a few years, Robert formed a partnership with Isaac Spaulding, Esq., which continued until he removed to Nashua.

By the time the young merchant had become one of the leading citizens of the town. He was chosen town clerk and in 1806 he was elected to the state legislature in 1806. With his other activities, he was associated with the Amherst Company Infantry of Amherst, noted as one of the best companies of militia in the state, which was due to his personal efforts. He served in all the campaigns and was promoted to command of the company. In 1808 he was appointed aide-de-camp to Governor Treadwell and was promoted to the rank of Colonel.

Some years later Colonel Read removed to Nashua, where a great interest in manufacturing was being rapidly developed. He showed such aptitude in this direction that within a few years in 1837, he was tendered the position of Agent of the Amoskeag Manufacturing Company to succeed Mr. H. H. H. He accepted this promising offer, and came at that crucial period when broader and more ambitious plans were being



WILLIAM AMORY

to carry on the industry of manufacture at Amoskeag Falls. Serving faithfully in his important office for twelve years, he became a valuable factor in the industrial development of the Company.

While an extremely busy man, he was courteous in his manner, and was universally liked by his fellow-men. Resigning his office January 1, 1852, he returned to Nashua, where he passed the remaining years of his life an honored and respected citizen. Colonel Read was twice married, his first wife being Miss Rebecca, a daughter of Frederick French, Esq., of Amherst. He married second Miss Jane Leland, of Saco, Me. A thoroughly business man, his activities were governed almost entirely by the interests he represented, though he freely gave his aid to such public measures as he believed for the general good. Never a politician, he did not identify himself with any political party while in Manchester. The only office he held while residing in this city was as delegate to the constitutional convention in 1851, where he served with marked ability.

WILLIAM AMORY

At a directors meeting held in Boston, April 12, 1837, William Amory was chosen treasurer and agent, "with power to buy cotton and other articles, and to have an office in Boston." Mr. Amory was a descendant in the fifth generation of Jonathan Amory, born in Somersetshire, England, in 1639, who, upon gaining his manhood, began a long mercantile career in Dublin, Ire. In 1865 he engaged in business in the West Indies, but soon after removed to Charlestown, S. C., where he became a leading citizen. He was a member of the Colonial Legislature, its speaker and treasurer. He died in the fall of 1689. His oldest son, Thomas, born in 1682,

became a merchant in London and the Azores. In 1719 he came to Boston, where he lived until his death, continuing his commercial pursuits. He left a son Thomas, born in Boston, April 22, 1722, who graduated from Harvard college in 1741. He was fitted for a clerical profession, but true to his ancestry he became a merchant, and was very successful. He died about 1782, leaving three sons, all of whom were merchants of respectability and wealth, being partners until the death of the eldest.

This brother, named Thomas C., was the father of William, the subject of this sketch, who was born in Boston, April 15, 1804. Like his grandfather he was graduated from Harvard College. Upon his graduation he went abroad for a year and a half, to pursue the study of law and general literature at the University of Gottingen, and for nine months at the University of Berlin. Returning in the spring of 1830, having taken an extended tour of the continent in the meantime, he resumed his legal studies and was admitted to the Suffolk County bar in 1831.

If heredity and education count for aught William Amory was perfectly fitted for the work of his life, and he proved himself in every way worthy of the mantle he wore. The same year he received his diploma to practice his profession he had never intended to follow, he was chosen treasurer of the Jackson Manufacturing Company at Nashua, N. H. His success here the following six years attracted the attention of the management of the Amoskeag Manufacturing Company, and he was invited to accept the most responsible position of the growing corporation at Amoskeag Falls.

The Company was beginning to realize the fruits of its early plans, and was on the threshold of yet greater work. It

only needed such a leader as he proved to be. He held the office of Treasurer for 39 years, and retired when he had reached the age of 72 years. He took charge when the mills were equipped with 8,000 spindles, and he left them with 137,000. The stockholders had received eleven per cent. a year, while a large amount coming from the net earnings had been applied to new machinery, additions to the mills and various improvements, besides which over \$2,000,000 had accumulated as "quick capital." In every respect he left the Company in excellent financial condition.

In addition to his service with the Amoskeag Company Mr. Amory was closely affiliated with nearly every other industry in Manchester. He was treasurer of the Stark mills from 1839 to 1876, with the exception of an interval of four and a half years. He was director in the Langdon mills from the beginning in 1860 and president from 1874 to 1876 inclusive. He was director in the Manchester mills and its successor the Manchester Print Works, from 1839 to 1871, inclusive.

Mr. Amory took an active part in the development of cotton manufacture and many of its improvements are due to his progressive spirit and good taste. He had his home in Boston, and until the railroad was opened in 1842, he went back and forth by stage-coach. He was lieutenant in the Boston Light infantry at the time of Lafayette's visit to New England. A personal friend of Daniel Webster, he was present when the cornerstone of Bunker Hill monument was laid. He was a brilliant conversationalist, genial in his disposition, inclined to historical research, and after his retirement from business in 1876 devoted his time to literary matters. He was an authority on all financial and literary questions,

and a highly respected member of one of the strongest mercantile firms in Boston.

He married Miss Anna P. G. Sears, the daughter of David Sears, and they had five children; three sons, William Jr., Charles Walter and Frank, and two daughters, Harriet and Ellen. He died after a lingering illness at his residence, 41 Beacon Street, Boston, Saturday morning, December 8, 1883, in his 84th year, leaving a well-deserved reputation for honesty and sagacity in all of his dealings.

It seems appropriate to close this sketch of Mr. Amory by quoting an excerpt from his last report made to the stockholders of the Company under date of October 20, 1876, inasmuch as it contains so many tributes to his colleagues during his long service. He said in part:

"And now, in closing this last chapter in the history of my official connection with this Company, after nearly forty years of uninterrupted employment, always pleasant to me, and often, I hope, useful to you, I ask for the first time, one moment's attention to a few words, only so far personal to myself as that they are expressive of my obligation to others with whom I have been so many years associated,—sure that, if this be egotism, and not usual in a business report, it will be pardoned in consideration of the length of my service.

"In the name of the Company I would acknowledge our obligations to the state from which we derived our charter, and under whose parental protection, friendly guidance, and legislative aid, we have attained our present growth. Next, to the efficient authorities and enlightened citizens of this flourishing and beautiful city, who guided by a wise policy of enlightened self-interest have recognized and accepted our mutual dependence and identity of interest, as the only basis of growth



REAR VIEW OF COLNING ROOM

and prosperity to either. Next, to our honored friend, the President, Judge Daniel Clark, who for more than thirty years in public and private has exercised so beneficial an influence, professional and personal, in the state, in the city, and this corporation, by inculcating that lesson of mutual dependence and identity of interest, just alluded to, and in many other ways. Next, to his colleagues, my friends and brother directors, who by their wise counsel, their ever ready aid, and friendly co-operation have contributed so much to the success of this enterprise, and to the relief of my anxiety and the promotion of my pleasure amidst the occasional perplexities and heavy responsibilities of my duties, and for their flattering vote and generous grant at their last meeting, on the occasion of my resignation.

"To all my coadjutors in all co-ordinate branches of our varied and extensive business, to our excellent selling agents for their industry and ability, integrity and judgment; to all under the superintendence of Mr. Straw, at Manchester, in the mills, machine shop, and counting room, for their fidelity and skill in their separate departments.

"Next, to Mr. Boyden, whom I am happy to see present—our first engineer—and my earliest reminiscence on coming to Manchester in the spring of '37, and who, in the forty years since then, is the most unchanged man, except in the steady increase in his reputation as a man of learning and science, that I ever saw; his simple tastes, love of science, indifference to money, and aversion to the use of tobacco being undiminished and of course incapable of being increased. If we measure our obligations to him by the increase in our water power at Manchester and Concord in consequence of his invention of the turbine wheel, according to the standard value of water power at Lowell, and allow him to charge for his first discovery of Mr.

Straw, his earliest assistant, it would enable him to indulge his tastes in philosophical and scientific experiments to the end of his days, unless he should also discover the elixir of life, which he seems already to have done.

"To my friend and confidential clerk, Mr. Whitman, who about thirty-nine years since, as an office boy, at less than a dollar a day entered the service of this Company, and has steadily risen since by his merits to his present responsible position. Being first faithful over a few things, I made him master over many things, till at last, by his experience, diligence, integrity, and skill, he has made himself indispensable to the Company.

"But, above all, to Governor Straw would I render the thanks that are due, as to him we owe a large part of such measure of prosperity as we have enjoyed for the last quarter of a century. Pre-eminently fitted by nature and education to excel in the management of the affairs of a Company, of the magnitude and variety of this, by his exceptional faculty of organization, his rare aptitude, experience and proficiency in mathematics, mechanics and manufacturing, his keen insight into human nature and instinctive power over men, and then by his marvelous luck, that element in character so difficult to define, and so essential to success,—and such a subtle compound of merit, good fortune and faith,—so nicely and cunningly blended that you can neither analyze nor dissolve it. If a mill foundation was to be laid in April, and the mill itself to be hurried to its completion before the close of the season for-out-of-door work, an early spring and late winter were sure to be vouchsafed to his wishes and prophecy. If a leak or other injury to the canal made a Sunday's job a work of necessity, even though a desecration of the Sabbath, he was providentially

avored by a fine day and a moonlight night. If a dam across the river at the falls or a river wall along the channel of the stream had to be built, a long summer's drought was graciously granted to his predictions and hopes, and when, by a miracle and a wall, the water was turned on the one side into land, and in order to restore the width of the river it was necessary on the opposite side, by another miracle to turn the land into water, he had only to stake out the ground and invoke the destructive power of an April freshet, and the floods came and the rains descended, and it was done by the twinkling of an eye, without cost to the Company and with such mathematical precision as to almost create a superstitious impression of his possessing some mysterious control over the elements.

"And now approaching the end of my report, already twice as long as it need be if I had had the time to shorten it, and face to face, figuratively at least, with my proprietors, past and present, for the last time, I will detain you only a few moments more. Of my first board of directors and of my first list of stockholders, few, very few remain. Year by year death has distributed and transferred their stock to descendants and others, draping almost every name in my earliest catalogue with an asterisk, and from the first to the last letter of the alphabet, and conveying a solemn warning that it is time for me also to surrender to some younger man the important trust I have, by your favor, so long administered, and accordingly I have done so, and by the board of directors,—happily, I am sure, for the interest of the Company,—Mr. T. Jefferson Coolidge has been appointed my successor.

"Thanking you again most cordially, I bid you all a hearty farewell."

EZEKIEL A. STRAW

Among the most active and successful men associated with the upbuilding of the Amoskeag Manufacturing Company was Ezekiel Albert Straw, who was born in Salisbury, N. H., December 30, 1819. He was the eldest child of James B. and Mehitable (Fisk) Straw. When he was about five years old his parents moved to Lowell, Mass., where his father entered the employ of the Appleton Manufacturing Company. Ezekiel began his education in the schools of the "spindle city," to graduate from the Lowell High School, which had been opened under Thomas M. Clark, afterwards Bishop of Rhode Island, in 1831. Not only did he matriculate from a historic school, but he was one of a noted quartette in his class. The three with him were Hon. Benjamin F. Butler, with the dual reputation of being a shrewd lawyer and adept politician, to say nothing of his military career; Gustavus V. Fox, the efficient Assistant Secretary of Navy during the Civil War; and George L. Balcom, a successful business man who settled at Claremont, N. H. Upon graduating with honors at this school he fitted himself in practical mathematics at Phillips Academy, Andover, Mass.

Upon leaving the last-named institution in the spring of 1838, he was employed by the Lowell and Nashua Railroad as assistant engineer. Mr. Thomas J. Carter was at that time engineer of the Amoskeag Manufacturing Company, and being in poor health he asked to be relieved of his duties and recommended the young assistant of the Lowell and Nashua Railroad. Mr. Boyden, the consulting engineer of the Company investigated the standing of that youth, and was so pleased with the report that he immediately invited him to take the position of substitute for awhile. Accordingly on July 4, 1838, he



HON. EZEKIEL A. STRAW

came to this city, being then only six months and four days over eighteen years of age. He did not dream he was to stay here more than a few weeks, but so ably did he perform his duties, that he was invited to remain, and so for forty years he was the dominating factor in the Company. He lived to see broad plans developed into wonderful changes. At the time he entered the service no mill had been erected on the east bank, and there had been no public sale of the Company's land. Almost his earliest work was the laying out of streets and house lots contained in the first plan. He assisted in the construction of the dam and the canals. He held the office of civil engineer until July 1, 1851, when he was chosen to succeed Robert Read as Agent of the Land and Water Power Company, the mills and machine shops being then operated separately.

The first of November, 1844, Mr. Straw was sent to England and Scotland to study the system of manufacture employed in those countries, particularly in the making of muslin delaines at that time holding out great promises to the ambitious manufacturers at Amoskeag. The knowledge he obtained was shown in the conduct of the Manchester Print Works, which introduced successfully this kind of manufacture in this country.

In July, 1856, the mills were united with the Land and Water Power Company, and two years later in 1858, the machine shops were added to the combination, and Mr. Straw was placed in entire control of the Company's operations. To him more than any other man, and we are not unmindful of the strong work done by his able associates during his period of activity, is to be credited the record of success. In its history is to be found the prominent features of his biography. He

was treasurer and principal owner of the Namaske Mills during the eight years of their existence, 1856 to 1864. He was chosen a director of the Langdon Mills in 1874. He was president and one of the directors of the Blodget Edge Tool Company from its organization in 1855 to its dissolution in 1862, when it was succeeded by the Amoskeag Axe Company.

Not alone in his devotion to the exacting duties of his responsible position on the Amoskeag Manufacturing Company, or his relations to the minor manufacturing interest in which he was the master spirit, Mr. Straw found opportunity, as the busy men always do, to lend his sustaining ability to affairs of the city and state, always exerting a healthy influence. He was a member of the committee to prepare plans for the rebuilding of the town house in 1844. He was also on the committee to devise methods for securing water for the city. He was a member of the first board of trustees elected in 1854 to safe-guard the newly-fledged library, remaining on the board until failing health compelled him to resign. He had been deeply interested in the construction of the library building, doing more probably than any other man towards its accomplishment.

He was one of the founders of the Unitarian society of Manchester in 1842, its clerk and treasurer until 1844, president from 1853 to 1857, and was chairman of the committee that built the present church.

He was made director of the Manchester Gas Light Company when it was organized in 1851, and was its president from 1856 for nearly twenty years. He was president of the New England Cotton Manufacturers' Association from its organization. He was chosen the first president of the New Hampshire Fire Insurance Company in 1870, holding the position until 1880.

He was elected as a representative to the state legislature in 1859 and was re-elected for four successive terms, serving his last three years in the legislature as chairman of the committee on finance. In 1864 and again in 1865 he was a member of the state senate, being its president during his second term. He was one of the committee to superintend the re-building of the State House. He served on the staff of Governor Stearns, and was a member of the centennial committee of New Hampshire to celebrate the American independence at Philadelphia in 1876.

His crowning honor in political life came in 1872, when he was elected governor of the state, and was re-elected in 1873. Both terms were marked with the high intelligence and faithful discharge of duty that was ever prominent in all the duties he performed. Dartmouth college honored him with the degree of Master of Arts.

Already his health had begun to fail him, and on January 1, 1879, he felt compelled to retire from active life after two-score years of unbroken industry such as falls to few to accomplish. The estimation in which he was held by his associates and co-workers was ably set forth in the declaration paid him by William Amory, and unanimously accepted by the directors of the Amoskeag Company at their annual meeting held October 8, 1879.

His sound practical wisdom, that attribute of character combining many minor merits, was a fruitful source of his success; his sanguine, sunny temperament and hopeful nature, while alleviating the wear and tear of his own arduous duties and heavy responsibilities in emergencies ever recurring in a business so diverse and manifold, inspired confidence and infused a healthful spirit of encouragement amongst all of his subordi-

nates in their different departments ; his intuitive knowledge of human nature and instinctive power over men displayed themselves conspicuously in every branch of our various business, elevating him in the eyes of all who knew him to the front rank, if not to the highest place in his calling, and stimulating all under him to do their best.

In summing up the character and life work of Governor Straw, Mr. Maurice Clarke, in his history of Manchester, N. H., says most fittingly :

"Governor Straw, in our judgment, is the ablest man in New Hampshire. He is conversant with more subjects than any man we know of, whether art or science, manufactures or financial schemes. He is a great reader and his tenacious memory makes all he reads his own. Not long after he came to this city, the Amoskeag Company began to look upon him as competent to manage its whole business and it gradually fell into his hands. In time other corporations, the city, the state looked to him for advice, and for many years he has been the foremost man in Manchester, and for the past few years the leading man in shaping the policy of the state. Of great mental capacities, he is able to turn off a vast amount of work with greatest ease. He never seems in a hurry, though probably surrounded by more business than any other man in the state. He never looks to others for his opinions, and, though willing to fall into line with his friends and his party in non-essential things, he cannot be swerved from his ideas of what is right by political considerations or fear of unpopularity. He enjoys truth and takes pleasure in doing what his judgment dictates. A very generous man, liberal in his gifts to the poor and to all charitable institutions, to him more than to any other man is Manchester indebted for its prosperity."

He was married April 6, 1842, to Miss Charlotte Smith, of Amesbury, Mass., and she died in Manchester, March 15, 1852. Four children were born to them: Albert, dying in infancy; Charlotte Webster, who married William H. Howard, of Somerville, Mass.; Herman Foster, who is the present agent of the Company; Ellen, who married Henry M. Thompson, at one time agent of the Manchester Print Works, and later agent of the Lowell Felting Company, at Lowell, Mass.

Governor Straw died October 23, 1882, after a long and painful illness, the most noteworthy figure in our city, and a man whose name will ever be held in just admiration as synonymous of business integrity and political honor in the highest degree.

DANIEL CLARK

Among those prominently identified with the Amoskeag Manufacturing Company for a long period was Hon. Daniel Clark. Judge Clark's long and active life was very closely associated with the material progress of Manchester. Though born in Stratham, N. H., and educated in the common schools of that town and the Hampton academy, he came to this city in 1837, the very time of the development of the Amoskeag Manufacturing Company. The same year he had been admitted to the bar of Rockingham county, and he opened an office here. Judicious in his arguments, courteous in his manner, eloquent in his pleas and moderate in his charges to his clients, he became a universal favorite with all.

While enjoying an extensive practice he found time to engage in the political issues of the day and was frequently called upon to speak, and was honored with elections to the state legislature in 1842, 1843, 1846, 1854 and 1855.

He was elected to the United States Senate in 1860, being chosen to fill the unexpired term of Senator Bell. At the expiration of the term he was re-elected and thus served ten years in congress during the most eventful period of the existence of the government. This exalted position he filled with great satisfaction to his constituents and honor to himself, though, owing to the custom of rotation in office then so thoroughly imbued in the principles of his party, he was not re-nominated for another term, in 1865.

The following summer, however, a vacancy having occurred in the office of district judge of the United States Court for New Hampshire, Senator Clark was appointed to that position by President Johnson, and unanimously confirmed by the senate. He continued to discharge the duties of this office for twenty-four years, though he was entitled to have retired in 1879 upon a salary for the rest of his life. He preferred to remain active, saying: "It is better to wear out than to rust out." Thus he held his office until his death, holding the last session of his court at Concord only two weeks before his decease.

Besides carrying on an extensive law practice, when not attendant upon his duties as senator, as well as giving considerable attention to political affairs, Judge Clark showed his ever established activity to equal advantage in his relations with local matters. The interests of Manchester ever lay close to his heart, and he held many offices of trust and confidence in the city. He was for a time a member of the school board, chief of the fire department, trustee of the city library, city solicitor, trustee of the state industrial school, besides other positions. Realizing the close connection of manufacture with the growth of the city, he early became interested in the success of the Amoskeag Manufacturing Company.



COL. THOMAS L. LIVERMORE

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COL. THOMAS L. LIVERMORE

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Thomas L. was born in Galena, Ill., February 7, 1844, the son of Solomon K. Livermore, Jr., but upon the death of his mother he came to Milford to live with his paternal grand-parents. He was educated in the town schools, the Appleton academy at Mont Vernon and Lombard University, Ill. In June, 1861, he joined the first New Hampshire Volunteers as private, but was promoted, from time to time, for meritorious service; served in the Second Army Corps, 1863, on the staffs of Generals Hancock, Hayes and Warren; in 1864, on the staffs of Generals Hincks, Smith, Martin and Ord, and later, Generals Hancock and Humphrey. He was Colonel of the 18th New Hampshire Vols. He was struck by the first shell at Antietam, and by a piece of shell at Malvern Hill.

At the close of the war he returned to Milford, and studied law in the office of Hon. Bainbridge Wadleigh, and was admitted to the bar in 1868. He married, June 1, 1869, Sarah Allen Daniels, and removing to Boston soon after, he opened a law office and had a successful practice for ten years, when, in 1879, he accepted the position of Agent in the Amoskeag Manufacturing Company, where he remained until May 26, 1885, during an important period of its history. One of the improvements made under his administration was the moving of all of the steam boilers to the west side of the river. Hitherto, these were contained in five boiler houses scattered through the mill yard. The plan was carried out under the direction of Capt. Charles H. Manning.

At the close of his service with the Amoskeag Company he resumed his law practice in Boston, but soon after

became interested in great financial enterprises. In November, 1889, he was made vice-president of the Calumet & Hecla Mining Company, assuming the management of its commercial and financial interests, retiring from these duties in 1910.

After half a century of tense activity in different fields of action, Colonel Livermore could afford to retire from the arduous demands of a busy life. Not only had he distinguished himself as a brave and efficient soldier, as a fearless and intelligent exponent of the law, but as a wise and successful administrator of the affairs of great commercial and manufacturing organizations.

CHARLES L. RICHARDSON

Charles Lowell Richardson, connected with the Amoskeag Manufacturing Company for over half a century, and for forty-four years as paymaster, was born in Lowell, Mass., May 24, 1827. His parents were Luther Richardson, a merchant, and Nancy Stetson, who belonged to an old and distinguished family. His paternal forefathers came from old England to New England in 1630, to settle in Charlestown and later in Woburn, Mass.

Educated in the schools of Waltham and Northampton, Mass., he came to Manchester January 1, 1845, entering the employ of the Amoskeag Company at once. Beginning as chore boy, he was promoted in time to the position of junior clerk under his uncle, Charles Richardson, then paymaster. Upon the resignation of the latter in 1855, he was made paymaster, or principal clerk, serving faithfully in that capacity until his resignation, January 23, 1899.

At a banquet on the 50th anniversary of his services, in



JAMES C. P. SON

1895, Agent Herman F. Straw said in part: "Of the millions of dollars that passed through his hands he never lost or misappropriated a dollar. In the words of Mr. Coolidge, 'So far as his part of the business was concerned, we can go to bed and sleep nights without worry when Mr. Richardson is there.' " So the record of Mr. Richardson exists, a connecting link between the old and the new management, and fortunate indeed is the man as well as the employer whose lot should have been to serve in such an auspicious association.

CHARLES W. AMORY

Mr. Amory was elected treasurer of the Amory Manufacturing Company, in 1880, and two years later he became treasurer of the Langdon Manufacturing Company. From these beginnings in manufacturing industries he soon became prominent in the industrial circles. He was elected a director of the Amoskeag Manufacturing Company on October 2, 1889, succeeding his father in that office. He was elected treasurer on November, 1, 1898, holding that office until his resignation October 27, 1905. He was elected president on January 10, 1906, serving in that capacity until December 23, 1912, when he resigned on account of ill health.

He was the second son of William and Anna (Sears) Amory, born in Boston on October 10, 1842. He fitted for college at the Boston Latin School, and the Lane and Lovering School in Cambridge, to enter Harvard in the class of '63. Following his graduation he entered the army and served with distinction, rising to the rank of captain.

He married, October 23, 1867, Miss Elizabeth Gardner, daughter of George Gardner of Boston. Their children

were two sons, William and George Gardner, and two daughters, Clara, who married Mr. T. Jefferson Coolidge, Jr., and Dorothy, who married Mr. Frederic Winthrop of New York. His wife, sons and first daughter survived him.

Mr. Amory was connected with numerous industrial and financial enterprises, among them being the Bell Telephone Company, American Telephone and Telegraph Company, the Western Telephone and Telegraph Company, the Bay State Trust Company, Old Colony Trust Company, Merchants National Bank, Western Electric Company, Edison Electric Illuminating Company of Boston, the Boston Manufacturing Mutual Fire Insurance Company, Cocheco Manufacturing Company, Lyman Mills and others.

With all of his varied activities he visited Europe twice, and in whatever he undertook he interested himself so that he became a valuable member of those bodies in which he became associated. He died at his residence, 278 Beacon street, Boston, November 5, 1913.

T. JEFFERSON COOLIDGE

Thomas Jefferson Coolidge, or T. Jefferson Coolidge as he prefers to sign his name, prominent in the industrial affairs of New England, came justly by his distinguished name, for he was on his maternal side the great-grandson of the author of the declaration of American Independence and third President of the United States. The Coolidges belonged to a notable family in English history. The first of the name to settle in this country, John Coolidge, settled in Watertown, Mass., in 1630, only ten years after the landing of the Pilgrims at Plymouth.

The subject of this sketch was the fourth son of Joseph and Ellen Wayles (Randolph) Jefferson, and he was born in Boston, Mass., August 26, 1831. With his brother, Sidney, he was instructed in the schools of Geneva and Dresden, where their father was staying at the time, remaining in Europe for eight years. In 1847, he entered the sophomore class of Harvard College, and graduated in 1850. Upon leaving college he interested himself in trade, first as a clerk in the employ of William Perkins, of Boston, and later, in 1853, as a partner with Joseph P. Gardner in the East India trade.

His active mind soon turned to other avenues of enterprise, and manufacturing attracted his attention. Becoming associated with the Boott Cotton Mills, of Lowell, he was chosen president of the company in 1853, at the time when his clear judgment and unswerving courage was most needed. In five years he had rescued the corporation from threatened financial disaster and placed it upon a solid business foundation.

Early in 1865 he went to Europe, taking up his abode in France, where he remained for two years. Upon his return to New England he accepted the presidency of the Oregon Railway and Navigation Company, but a year later he returned to an active part in manufacturing industries. At the annual meeting of the directors of the Amoskeag Manufacturing Company held November 1, 1876, he was elected treasurer of the company, which position he occupied until February 10, 1880. He resigned this and other positions connected with manufacturing in order to favor those who desired his efforts in another direction. In 1880 he was elected president of the Atchinson, Topeka and Santa Fe Railroad, to rescue a weakened corporation from complete collapse. As

usual he was successful, and in two years he had placed the road upon such a successful basis that he felt warranted in resigning his office, to take up again the more congenial business of directing great manufacturing interests. The following year he became identified with the Dwight, Amory and Amoskeag Manufacturing Companies. June 19, 1884, he was again chosen treasurer of the last-named corporation, holding the responsible position this time for almost eight years, or until May 6, 1892, he having received on April 28, previous, the appointment of United States Minister to France, by President Harrison, as successor to Hon. Whitelaw Reid, resigned. He filled this office with eminent satisfaction to all concerned until the close of President Harrison's administration in 1893, when again we find him active among manufacturers.

October 30, 1893, for the beginning of a third period he was elected to the office of treasurer of the Amoskeag Manufacturing company, serving this time until November 1, 1898. The entire length of his service as treasurer was over sixteen years.

October 2, 1901, he was elected president of the directors, holding this position until October 4, 1911.

In addition to his activities mentioned, Mr. Coolidge was a director in the Chicago, Burlington and Quincy Railroad, the Boston and Lowell Railroad, and various other railroad enterprises. He was for several years a director in the Merchants' National Bank of Boston, and the Old Colony Trust Company. In 1886 he was elected as overseer of Harvard Corporation, and re-elected in 1891. He was park commissioner of Boston in 1875 and 1876, and was a delegate to the Pan-American Congress in 1889. It was largely through his efforts that the success of the visit of the members of the Con-



gress to American manufacturers was due, as described in another chapter. August 25, 1898, he was made a member of the Anglo-American Commission which met that year at Quebec.

Always deeply interested in philanthropic movements he served as president or treasurer of several associations of this kind. His summer residence was at Manchester-by-the-Sea, and he remembered that city with the gift of a public library building which cost \$40,000. To Harvard university he gave, in 1884, the Jefferson Physical Laboratory, a building erected at a cost of \$115,000. He gave generously to many public charities of Boston. He was a member of the Somerset Club, of Boston, and the Harvard and University Clubs, of New York. Harvard bestowed upon him, in 1902, the honorary degree of LL. D.

Mr. Coolidge was united in marriage, in 1852, to Hetty S., daughter of the Hon. William and Mary Anne (Cutler) Appleton. Mr. Appleton was a descendant of Samuel Appleton (1586-1670), who came to New England from Little Waldenfield, England, in 1635, to be made a freeman in Ipswich, May 25, 1636, and deputy to the General Court in 1637. Mr. and Mrs. Coolidge were favored with four children, three daughters and a son. The latter, T. Jefferson, Jr., besides holding many offices of trust and honor, was an important factor, before his death, in the conduct of the Amoskeag Manufacturing Company.

Of a genial nature, Mr. Coolidge is a most estimable gentleman to meet and has won friends wherever he has extended his acquaintances. He has never sought or held political office. The Amoskeag Manufacturing Company showed its appreciation of his valuable services by naming one of its

largest and handsomest mills for him. By a singular coincidence another of the older mills bears the name of Jefferson in honor of his own ancestor.

CAPT. HARRY E. PARKER

Among the younger men employed by the Amoskeag Manufacturing Company not one enjoyed to a greater extent the confidence of his employers or the esteem of his employees than Harry E. Parker, the son of William and Susan J. Parker. He was born in Concord, N. H., September, 22, 1858, but the family removing to Boston, he was educated in the public schools of that city. Coming to Manchester in 1881, he entered the employ of the Amoskeag Manufacturing Company, and was made superintendent of the manufacturing department in 1885, holding that position until his decease, August 1, 1906.

Mr. Parker possessed remarkable executive ability, and by close application to his duties became an important factor in the management of the corporation. He represented his ward in the state legislature in 1885 and 1886; was a director of the Manchester Traction, Light and Power Company. He was a member of Lafayette Lodge, A. F. and A. M., and Ridgely Lodge, No. 74, I. O. O. F., and of the first Regiment, N. H. N. G. serving as paymaster and adjutant.

Mr. Parker married Miss Jennie B. Smith of this city November 6, 1890, who survived him, as well as two brothers, Winthrop, superintendent of spinning for the Amoskeag Manufacturing Company and George T., connected with the General Electric Company of Schenectady, N. Y., and one sister, Mrs. Herman F. Straw of this city.



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CAPT. HARRY E. PARKER

CHAPTER XVI

THE OFFICIAL ROSTER

THE operations and progress of the Amoskeag Manufacturing Company, from its earliest inception, can be divided into six stages: the period of the building of the "Old Mill" and its beginning of manufactures, 1805* to 1810; the career of the "Amoskeag Cotton and Wool Manufactory," January 31, 1810 to October 22, 1822; the regime of Olney Robinson from the latter date to January 24, 1825; the existence of the partnership between the six founders of the Amoskeag Manufacturing Company, commencing December 17, 1825, and ending with the reorganization and incorporation of that plant, which continued until the style of a voluntary association was accepted in its place September 29,

*Since writing the foregoing pages I have seen Mr. Samuel Batchelder's work upon the history of early cotton manufacture in New England in which he attempts to show that Mr. Prichard could not have come to Amoskeag before 1810. He candidly acknowledges that the Jonas Harvey letter offers pretty good evidence that Mr. Prichard built a mill at Amoskeag Falls in 1804, and yet he tries to refute the statement by saying that Mr. Prichard did not stop paying taxes in New Ipswich until 1807, and he was knowing to the fact that the other assisted in building a second factory in the town that year. This can be allowed and still show that he came to Amoskeag late in the fall of 1804. Getting out his lumber that winter it seems certain he built his mill early in the following year, for in 1806 he paid his first tax in Goffstown. This was as soon as he would most likely have been taxed there, even had he begun work in December, 1804, as his mill would not have been completed before the spring assessment. The deeds show that he had already disposed of a part of his property in New Ipswich, but he does not appear to have sold the last until the summer of 1807. It is not only possible but probable that he went back and forth between this locality and that town late enough to have assisted in the building of the second factory there. With his experience it was natural he should have done so. But that fact does not disprove the claim that he was already established at Amoskeag.—G. W. B.

and ratified by a vote of the stockholders at the annual meeting in October, 1911. The company now exists under this form, though the old corporation has a set of officers.

OFFICERS OF THE PIONEER PERIOD

There are no records of the election of any officers during the period of building and fitting up the "Old Mill," and starting the wheels of manufacturing. Benjamin Prichard, the originator and prime mover in the enterprise, was beyond doubt the business manager, as well as the principal owner. David McQuestion, as well as the Stevens brothers, Ephraim and Robert, was closely associated with the undertaking, and it is probable that he had charge of the sales department. It seems worthy of mention to say that Mr. McQuestion's son Calvin, born in 1801, at the same time Oliver Dean and his associates were carrying into effect their ambitious plans at Amoskeag Falls was helping to establish a manufacturing industry at Hamilton, Canada, that stands today in the same relation to the town as the Amoskeag Manufacturing Company does to Manchester. Like Dr. Dean, Calvin McQuestion was a physician by profession.

OFFICERS OF THE AMOSKEAG COTTON AND WOOL MANU- FACTORY

Upon the reorganization of the business under the style of "The Amoskeag Cotton and Wool Manufactory," January 31, 1810, at an adjourned meeting February 9, 1810, James Parker of Bedford was chosen president; Jotham Gillis, clerk, and at a directors' meeting July 23, 1811, the latter was made the first agent. The directors were James Parker, Samuel P. Kidder, John Stark, Jr., David McQuestion and Benjamin Prichard. Mr. Gillis was succeeded as agent November 20,

1812, by Philemon Walcott. April 26, 1813, John G. Moore was chosen to the office, which he held until the annual meeting July 28, 1813, when Frederick G. Stark was elected for a year, the usual term. It is probable he served much longer, though so little business was done during the following seven years few meetings seem to have been held. At least I have found no records of any further election.

THE ORIGINAL AMOSKEAG MANUFACTURING COMPANY

Olney Robinson, of Pawtucket, R. I., became owner and manager October 22, 1822, selling out January 24, 1825, to the six men who became the members of a new firm organized December 17, 1825 under the style of "Amoskeag Manufacturing Company." Lyman Tiffany was chosen president; Ira Gay, clerk; Oliver Dean, agent. Besides these gentlemen the board of directors included Samuel Slater, of Providence, Willard Sayles, Boston, and Larned Pitcher, of Rehoboth, Mass. This board remained with little or no change until the reorganization and incorporation in 1831.

THE HOOKSETT MILLS

This division included the management of the Hooksett Mills, eight miles up the river, from their purchase by the Amoskeag Manufacturing Company in 1835. These mills were under the successive management of Hiram A. Daniels, Joshua and Stephen Ballard, William L. Killey and Thomas Wattles, until 1865, when they were sold to a new corporation, and the branch of manufacture done here was taken up by the Manchester Print Works.

LAND AND WATER POWER COMPANY

While the negotiations in land and the control of water power had been kept distinct from the manufacturing of goods,

it was done by the same officers until in 1838, active operations having been begun on the east side, it was found necessary to make a division. Accordingly the department known as "The Land and Water Power Company" was created, with Robert Read as agent, who held the office until 1852. He was succeeded by Ezekiel A. Straw, who was promoted to the head of the company in 1856, and the three divisions then existing were united in one.

THE MACHINE SHOP

The company in its thorough and comprehensive designs built not only its own dams, canals, weirs and such works as were necessary for the control and utilization of the water power; constructed its own mills, shops, store houses, power plants, dwelling and boarding houses, but built and equipped in a large measure the mills of other corporations locating here. Thus the machine shops, which included the old and new foundries, boiler, forge, tank, paint and repair shops, pattern houses and store houses, became important adjuncts to the company. As has been seen this was especially so during the period of the Civil War, when it was always difficult and sometimes impossible to keep the cotton manufacturing moving. Of late years the shops have confined their work entirely to the making and repairing of machinery needed in its own mills.

This department was instituted in 1840, at the completion of the first shop. William A. Burke was appointed agent, holding the office until 1847, when he resigned to go to Lowell, Mass., and the office was taken by Oliver W. Bayley. He resigned in 1855, to become agent of the Manchester Locomotive Works, and Cyrus W. Baldwin became his successor. Within a year this division was brought under the



HERMAN F. STRAW

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HERMAN F. STRAW

supervision of the newly appointed agent of the mills, E. A. Straw. At the annual meeting in 1858, the departments of the Land and Water Power and the Machine Shops were placed under one government, which in the future was to control the entire business of the Company.

The first paymaster at the Machine Shop was Joseph Knowlton, who was succeeded by William G. Means, Edward Kendall, Justus D. Watson, Horace M. Gillis, Nehemiah S. Bean.

MANUFACTURING DEPARTMENT

First in its conception, foremost in its utility, final in its results, the manufacturing department has been the sun around which the other planets have revolved. Many men and many minds have co-operated towards its success, to all of whom belongs a share of the credit. It is seldom that so many have worked together with the utmost harmony which has marked the long experience of the Amoskeag Manufacturing Company. In considering the accomplishments of any officer in the long list, however capable he may have been personally, it is well to realize that always he was supported by a strong and forcible corps of associates. Without this hearty and prompt assistance no one could have accomplished the aims he had in view.

Dr. Oliver Dean issued the warrant for the first meeting of the stockholders of the Amoskeag Manufacturing Company on July 6, 1831, the instrument dated at Goffstown, N. H. The first meeting was held seven days later in the counting room of the Bell Mill at Amoskeag. Dr. Dean was chosen moderator; Ira Gay, clerk. This preliminary organization then adjourned to the following morning at seven o'clock, when the first election of a board of officers took place. From that election, July 14, 1831, to the present year, 1915, the official roster of the Company has been as follows:

PRESIDENTS

Lyman Tiffany, July 14, 1831, to April 13, 1836, when he resigned.
 Samuel Hubbard, pro tem., to fill unexpired term of Mr. Tiffany.
 Philemon T. Jackson, July 13, 1836, to July 26, 1837.
 Francis Cabot Lowell, July 26, 1837, to July 27, 1842.
 Joseph Tilden, July 27, 1842, to his decease in 1853.
 Gardner Brewer, July 29, 1853, to September 19, 1853.
 Oliver Dean, September 19, 1853, to October* 4, 1871,† when he resigned.
 Gardner Brewer, October 4, 1871, to his decease in 1874.
 Daniel Clark, October 7, 1874, to October 3, 1877.
 William Amory, October 3, 1877, to his decease in 1889.
 Daniel Clark, October 2, 1889, to October 7, 1891.
 Thomas Wigglesworth, October 7, 1891, to October 5, 1892.‡
 William P. Mason, October 5, 1892, to October 2, 1895.
 George A. Gardner, October 2, 1895, to October 2, 1901.
 T. Jefferson Coolidge, October 2, 1901, to October 4, 1911.
 Charles W. Amory, October 13, 1911, to December 23, 1912, when he resigned.
 Theophilus Parsons, December 23, 1912, to the present time,

CLERKS OF THE STOCKHOLDERS

Ira Gay, July 13, 1831, to July 10, 1833.
 George Daniels, July 10, 1833, pro tem.; elected July 17, 1833, to July 9, 1834.
 Harvey Hartshorn, July 9, 1834, to July 13, 1836.
 Hiram Daniels, July 13, 1836, to July 26, 1837.
 Robert Read, July 26, 1837, to July 25, 1838.
 William G. Means, July, 25, 1838, to July 29, 1853.
 Ezekiel A. Straw, July 29, 1853, to October 8, 1879, when he declined a re-election.
 Thomas L. Livermore, October 8, 1879, to June 6, 1885.
 Herman F. Straw, June 6, 1885, to October 4, 1911; and re-elected under the reorganization and still holding the office. Name changed to Secretary.

*At the annual meeting called for July 14, 1857, an adjournment was made to October 1, 1857. Upon the re-assembling of the meeting on the latter date, it was voted to change the time of holding the annual meeting from July to October.

†This was one of the most memorable meetings in the history of the Amoskeag Manufacturing Company, inasmuch as two of the oldest and most potent members declined to serve in active positions longer on account of waning strength, and another had become ineligible on his disposal of stock. The first couple were Oliver Dean and George W. Lyman; the third member was George Howe.

‡Mr. Wigglesworth's name continued to head the list of directors, though he declined to act as president.

One of the directors, the chairman unless otherwise selected, served as President of both bodies, the stockholders and directors.

NAMES OF ORIGINAL STOCKHOLDERS

Ira Gay	Lyman Tiffany	Willard Sayles
Oliver Dean	Samuel Slayter	Larned Pitcher

STOCKHOLDERS, 1835

Oliver Dean	Isaac Hill	Robert D. C. Merry
Lyman Tiffany	Richard H. Ayer	Samuel Frothingham
Willard Sayles	Foster Towne	George Daniels
Ira Gay	John Nesmith	Wilber Gay
Larned Pitcher	Samuel Bell	Hiram A. Daniels
Thomas R. Sewell	James Means	George Howe
Abraham Howard		

STOCKHOLDERS, 1836

Willard Sayles	Oliver Dean	Lyman Tiffany
Larned Pitcher	George Howe	Samuel Frothingham
James Means	Thomas R. Sewell	Abraham Howard
Ira Gay	John Nesmith	Isaac Hill
Richard H. Ayer	Dr. John Hornan	Charles P. Curtis
William C. Gorham	Benjamin Seaver	Henry Hall
Henry Rice	George H. Kuhn	James K. Mills & Co.
George W. Pratt	Charles H. Parker	Francis Bassett
Charles Amory	Benjamin Guild	W. Frimes
James Freeman	Samuel Bell	George Daniels
Hiram A. Daniels	Samuel Goddard	Benjamin Goddard
Caleb Eddy	R. D. C. Merry	Henry Plympton
H. M. Gridley	John Stearny	Peter R. Dahon
Whitwell, Bond & Co.	James C. Dunn	D. D. Broadhead
William P. Mason	J. W. Edwards	Amory Warren
Samuel May	W. H. Gardner	William Appleton
Henry Cabot	Philemon T. Jackson	Benjamin Gorham
Joseph Tilden	William Sullivan	John C. Warren
F. C. Lowell	Ebenezer Chadwick	George W. Lyman
Abbott Lawrence	William H. Prescott	Dudley L. Pickman
Samuel Whipwell	George Bond	S. S. Lewis
Amos Binney	Samuel Hubbard	Livermore & Kendall
J. H. Walcott	Samuel A. Hitchcock	Samuel Fales
William Amory	Nathan Appleton	Bruce & Richards
Joseph Hall		

DIRECTORS

The first Board of Directors, chosen July 14, 1831, consisted of three members. This number remained unchanged until at a special meeting, April 13, 1836, it was voted by the stockholders to increase the board to nine members. To this date the directors had been accustomed to

meet with the stockholders, and thus their records were absorbed by the records of the latter body. April 18, 1836, the directors held their first distinct meeting. The following lists of the different boards are taken from the stockholders records, and are believed to be accurate. The terms of office are reckoned from the day of their annual election, unless otherwise specified, beginning with July 14, 1831:

1831—1835

Lyman Tiffany, Ira Gay, Willard Sayles.

1835—1836

Lyman Tiffany, Willard Sayles, Oliver Dean.

1836—1837

Lyman Tiffany, Willard Sayles, Oliver Dean, Philemon T. Jackson, William Appleton, George Bond, Samuel Frothingham, Daniel D. Broadhead, George Howe.

1837—1838

Oliver Dean, Willard Sayles, George Howe, Samuel Frothingham, Francis C. Lowell, Daniel D. Broadhead, (Mr. Broadhead resigned January 22, 1838), Samuel Hubbard, William Appleton.

1838—1839

Francis C. Lowell, Oliver Dean, Willard Sayles, George Howe, George W. Lyman, Nathan Appleton, William Appleton, Samuel Hubbard, James K. Mills.

1840—1841

Francis C. Lowell, Oliver Dean, Willard Sayles, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1842—1846

Joseph Tilden, Oliver Dean, Willard Sayles, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1847—1850

Joseph Tilden, Oliver Dean, William Amory, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1851—1852

Joseph Tilden, Oliver Dean, Robert Read, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1853—1855

Gardner Brewer, Oliver Dean, Robert Read, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.



HENRY J. PARK

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1835—1836

Lyman Tiffany, Willard Sayles, Oliver Dean.

1836—1837

Lyman Tiffany, Willard Sayles, Oliver Dean, Philemon T. Jackson, William Appleton, George Bond, Samuel Frothingham, Daniel D. Broadhead, George Howe.

1837—1838

Oliver Dean, Willard Sayles, George Howe, Samuel Frothingham, Francis C. Bond, Daniel D. Broadhead, (Mr. Broadhead resigned January 22, 1838), Samuel Appleton, William Appleton.

1838—1839

Francis C. Bond, Oliver Dean, Willard Sayles, George Howe, George W. Lyman, Nathan Appleton, William Appleton, Samuel Hubbard, James K. Mills.

1840—1841

Francis C. Bond, Oliver Dean, Willard Sayles, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1842—1846

Joseph Tilden, Oliver Dean, Willard Sayles, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1847—1850

Joseph Tilden, Oliver Dean, William Amory, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1851—1852

Joseph Tilden, Oliver Dean, Robert Read, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.

1853—1855

Gardner Brewer, Oliver Dean, Robert Read, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham.



HON. DANIEL CLARK

1856—1858

Gardner Brewer, Oliver Dean, George Howe, George W. Lyman, Nathan Appleton, David Sears, William Appleton, Samuel Frothingham, Jonathan T. P. Hunt. Note: Robert Read resigned July 26, 1856, on account of ill health and Mr. J. T. P. Hunt was chosen in his place. David Sears resigned in 1857, and declined to serve in 1858, but in both terms the place remained vacant. For twenty years in which the foundation of the Company's power was formed only slight changes were made in the personnel of its management.

1859—1860

Oliver Dean, George Howe, George W. Lyman, Nathan Appleton, Samuel Frothingham, Gardner Brewer, Jonathan T. P. Hunt.

1861

Oliver Dean, George Howe, George W. Lyman, William Appleton, Gardner Brewer, Jonathan T. P. Hunt. Note: After twenty-five years service, Samuel Frothingham resigned, leaving only six on the board. At the following annual meeting it was voted that there should be not more than nine or less than five directors.

1862—1865

Oliver Dean, George Howe, George W. Lyman, Gardner Brewer, Jonathan T. P. Hunt. In 1862 the number of directors was reduced to five, but four years later it was increased to seven.

1866—1870

Oliver Dean, George Howe, George W. Lyman, Gardner Brewer, Daniel Clark, T. Jefferson Coolidge, Thomas Wigglesworth.

At the annual meeting in 1871, Dr. Oliver Dean, after forty years of service, and George W. Lyman after thirty-three years, both declined a re-election, while George Howe after thirty-five years of affiliation had disposed of his stock and thus became ineligible to hold office. The new board comprised:

1871—1873

Gardner Brewer, Daniel Clark, T. Jefferson Coolidge, Thomas Wigglesworth, William Amory, John L. Gardner, William P. Mason.

1874—1876

Daniel Clark, T. Jefferson Coolidge, Thomas Wigglesworth, William Amory, John L. Gardner, William P. Mason, Charles Amory.

1877—1879

William Amory, Daniel Clark, T. Jefferson Coolidge, Thomas Wigglesworth, John L. Gardner, William P. Mason, John L. Bremer, George Dexter, Ezekiel A. Straw.

1880

William Amory, Daniel Clark, T. Jefferson Coolidge, John L. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter.

1881—1883

William Amory, Daniel Clark, T. Jefferson Coolidge, John L. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter, Thomas Wigglesworth.

1884

William Amory, Daniel Clark, T. Jefferson Coolidge, George A. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter.

1885—1888

William Amory, Daniel Clark, T. Jefferson Coolidge, Thomas Wigglesworth, George A. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter.

1889—1890

Daniel Clark, T. Jefferson Coolidge, Thomas Wigglesworth, George A. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter, Charles W. Amory.

1891—1893

Thomas Wigglesworth, T. Jefferson Coolidge, William P. Mason, (president), George Dexter, John L. Bremer, Channing Clapp, George A. Gardner, Charles W. Amory, G. Byron Chandler.

1894—1898

William P. Mason, Thomas Wigglesworth, T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, G. Byron Chandler, George Von L. Meyer, Henry F. Sears.

1899—1900

William P. Mason, T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, G. Byron Chandler, George Von L. Meyer, Henry F. Sears, J. Lewis Stackpole.

1901—1903

T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, G. Byron Chandler, George Von L. Meyer, Henry F. Sears, J. Lewis Stackpole, George Wigglesworth.

1904

T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, G. Byron Chandler, George Von L. Meyer, Henry F. Sears, George Wigglesworth, Frederic C. Dumaine.

1905—1907

T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, George Von L. Meyer, Henry F. Sears, George Wigglesworth, Frederic C. Dumaine, Frank P. Carpenter.



LUCIUS M. SARGENT

1880

William Amory, Daniel Clark, T. Jefferson Coolidge, John L. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter.

1881—1883

William Amory, Daniel Clark, T. Jefferson Coolidge, John L. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter, Thomas Wigglesworth.

1884

William Amory, Daniel Clark, T. Jefferson Coolidge, George A. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter.

1885—1888

William Amory, Daniel Clark, T. Jefferson Coolidge, Thomas Wigglesworth, George A. Gardner, William P. Mason, John L. Bremer, Channing Clapp, George Dexter.

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William P. Mason, T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, G. Byron Chandler, George Von L. Meyer, Henry F. Sears, J. Lewis Stackpole.

1901—1903

T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, G. Byron Chandler, George Von L. Meyer, Henry F. Sears, J. Lewis Stackpole, George Wigglesworth.

1904

T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, G. Byron Chandler, George Von L. Meyer, Henry F. Sears, George Wigglesworth, Frederic C. Dumaine.

1905—1907

T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, George Von L. Meyer, Henry F. Sears, George Wigglesworth, Frederic C. Dumaine, Frank P. Carpenter.



LUCIUS M. SARGENT

1908—1909

T. Jefferson Coolidge, George A. Gardner, George Dexter, Charles W. Amory, George Von L. Meyer, T. Jefferson Coolidge, Jr., George Wigglesworth, Frederic C. Dumaine, Frank P. Carpenter.

1910—1911

T. Jefferson Coolidge, George A. Gardner, Charles W. Amory, George Von L. Meyer, George Wigglesworth, Frederic C. Dumaine, Frank P. Carpenter, Theophilus Parsons.

Upon the adoption of the plan to transform the corporation into a voluntary association, according to the vote of the directors August 22, 1911, and ratified by the stockholders September 29, 1911, there were chosen to manage the affairs of the company the following trustees:

1911—1912

Charles W. Amory, Theophilus Parsons, Frank P. Carpenter, Frederic C. Dumaine, for three years.

George Von L. Meyer, Galen L. Stone, Philip Dexter, William Amory, for two years.

T. Jefferson Coolidge, George A. Gardner, T. Jefferson Coolidge, Jr., George Wigglesworth, for one year.

1912—1913

Elected for three years

T. Jefferson Coolidge, George A. Gardner, George Wigglesworth, Charles Cutting.

1913—1914

Elected for three years

George Von L. Meyer, Galen L. Stone, Philip Dexter, William Amory.

The first meeting of the directors and stockholders held out of town was called for August 26, 1835, when the directors and stockholders met at the salesroom of Sayles & Hitchcock, No. 83 Kilby St., Boston.

In 1862 the number of directors was reduced to five, but in 1866 it was increased to seven members.

October 8, 1839, the Board of Directors was given absolute power in the management of the corporation, and the

president of this body was also president of the stockholders' meetings.

CLERKS OF THE DIRECTORS

The first entry in the records of the clerk of the directors is dated at Amoskeag, July 14, 1836, when Lyman Tiffany presided, and Ira Gay was clerk. The second entry is dated July 12, 1835, and Lyman Tiffany and Ira Gay were elected president and clerk respectively. These items were evidently entered under wrong dates, and were intended for 1831 and 1832. The first directors' meeting was held April 18, 1836. Beginning with this date the clerks of the organization have been:

Willard Sayles, April 18, 1836, to July 26, 1837.
William Amory, July 26, 1837, to October 31, 1838.
Thomas L. Stackpole, October 31, 1838, to August 1, 1843.
Otis Everett, Jr., August 1, 1843, to September 19, 1853.
Richard S. Fay, Jr., September 19, 1853, to January 22, 1856.
William Amory, Jr., January 22, 1856, to July 20, 1869.
James H. Whitman, July 20, 1869, continuously to the present time.

At the meeting of January 15, 1906, the term of Clerk was changed to Secretary.

TREASURERS

Oliver Dean, July 14, 1831, to April 18, 1836.
Francis C. Lowell, April 18, 1836, to March 17, 1837, and resigned.
Samuel Frothingham, pro tem., March 17, 1837, to April 12, 1837.
William Amory, April 12, 1837, to November 1, 1876, resigning then the responsible office after almost forty years of efficient service.
T. Jefferson Coolidge, November 1, 1876, to February 10, 1880.
Channing Clapp, February 10, 1880, to June 19, 1884.
T. Jefferson Coolidge, June 19, 1884, to May 6, 1892.
Lucius M. Sargent, May 17, 1892, to October 9, 1893.
T. Jefferson Coolidge, October 30, 1893, to November 1, 1898.
Charles W. Amory, November 1, 1898, to October 27, 1905.
Frederic C. Dumaine, October 27, 1905, and still holding the office.

AGENTS

Under the original management of Mr. Prichard and his associates, 1804 to 1810, there is no existing record, as far as I know, of any regular election of officers. It is probable that David McQuesten had charge of the sales department.

Following the re-organization of the company January 31, 1810, the following persons served as agents :

Jotham Gillis, January 31, 1810, to November 20, 1812.

Philemon Walcott, November, 20, 1812, to April 26, 1813.

John G. Moore, April 26, 1813, to July 28, 1813.

Frederick G. Stark, July 28, 1813, to the Spring of 1822.

Olney Robinson seems to have been his own agent as long as he had the management.

The agents at Amoskeag Old Mills were:

Oliver Dean, December 17, 1825, to August 6, 1834.

Harvey Hartshorn, August 6, 1834, to April 13, 1836.

Previous to this meeting agents were elected by the stockholders, but at this time it was voted to transfer their election to the board of directors. The list continues with:

Francis C. Lowell, April 13, 1836, to October 8, 1846. Differences of opinion relative to the conduct of the business arose between Mr. Lowell and the directors, so he declined to serve longer.

William Amory, April 12, 1837, to July 31, 1841. Mr. Amory, who was also treasurer and acted as buying agent, had an office in Boston. He worked especially for the extension of business on the east bank of the river.

Different persons were chosen as agents for the old mills at Amoskeag. Their names were:

William P. Newell, April 12, 1837, to October 8, 1846.

Phineas Adams, October 8, 1846, to November 17, 1847.

Charles W. Blanchard, November 17, 1847, to March 30, 1848.

The last of the old mills burning on this date, the office ceased. Meanwhile the office as regarded the business of Amoskeag New Mills was filled by:

David Gillis, November 29, 1841, to December 26, 1856, when he resigned.

Ezekiel A. Straw, December 26, 1856, to December 23, 1878, when he resigned on account of failing health.

Judge Daniel Clark, pro tem, December 23, 1878, to March 22, 1879.

Thomas L. Livermore, March 22, 1879, to May 26, 1885.

Herman F. Straw, 1885 and still holding the office.

SELLING AGENTS

Not a little of the credit of the success of the Amoskeag Manufacturing Company belongs to the men in control of the selling department, the most conspicuous of these being Messrs. Sayles, Amory, Brewer, Bremer, Bausher, Coolidge and Du-maine. It is a comparatively easy matter to dispose of goods advantageously when the demand exceeds the supply, or when there is a steady call for a certain line of fabrics which the manufacturer is able to furnish; but this proposition becomes an entirely different problem when the reverse is met. Thus to find a continual market for the manufactured products of a concern during hard times, or periods of sharp competition, requires not only skill in the conduct of affairs, but sound business methods. Two important factors explain the secret of the success of the company. First of these is the fact that the fabrics have always been of a quality above honest criticism, and second that they have been manufactured at as low cost as is possible considering the quality. Again, from the day when Sayles & Merriman, in their office on Kilby street, Boston, first began to handle the goods to the present time, the selling organization has always been safe, strong and aggressive.



ENDING

Prior to 1838 there was no organized effort to sell the goods manufactured. In fact the business had not reached a bulk which called for extra endeavor to place the products on the market. Neither had there been houses to undertake this had one been desired.

January 1, 1838, Messrs. Sayles & Merriman of Boston became the pioneer sales agents for the goods of the Amoskeag Manufacturing Company, and George Howe managed the output of the mill at Hooksett.

November 29, 1841, George W. Lyman, George Howe and William Amory were chosen a committee to contract for the sale of the company's goods upon such terms or conditions as they thought expedient.

October 4, 1859, Gardner Brewer & Co., became selling agents, continuing until 1874. During their conduct of affairs, on January 1, 1871, the directors voted to increase the commission on sales to 1 1-2 per cent., allowing \$5000 to cover the cost of storage. President Brewer, the head of the house, dying November 30, 1874, the firm was re-organized, and the Gardner Brewer Company was retained as selling agent.

May 22, 1879, a commission of .02 per cent. was voted J. L. Bremer & Co., selling agents in New York, but when this company asked for an increase in 1883, it was denied. February 4, 1888, .02 1-4 per cent. commission was granted. October 30, 1893, John L. Bremer resigned as a director, and the house as selling agents, when the duty of selling the manufactured goods of the company was given to the treasurer, with full power, subject to the ratification of the board.

Following the resignation of the house of J. L. Bremer & Co., as selling agents, in 1893, Messrs. Noyes, Bausher &

Gerrish were appointed to act in this capacity, and continued as selling agents until April 15, 1907, when the firm was dissolved, and an agreement was made for the sale of the goods with its successor C. L. Bausher & Co. The contract with this concern was terminated December 22, 1909, and the Amoskeag Manufacturing Company assumed the full control of the sale of its own goods under the direction of its treasurer, Mr. F. C. Dumaine.

David W. Jarvis and William S. Prankard, who for many years have been connected with the selling offices of the Amoskeag Manufacturing Company, in New York city, have been jointly appointed to succeed Walter L. Wellington, who died on July 15, 1914. Mr. Wellington had been the New York agent of the company since Jan. 1, 1910.

The selling end will be designated as "Amoskeag Manufacturing Company, Jarvis & Prankard, Agents," instead of Amoskeag Manufacturing Company, W. L. Wellington, Agent.

SUPERINTENDENTS

This official term did not apparently come into use until the formation of the Land and Water Power Department, when Robert Read was chosen to that position February 20, 1837, serving until his resignation January 24, 1851. The records say that he was given the power to discharge men under him, and if discharged himself by the agent, he could appeal to the board of directors.

PAYMASTERS

The first paymaster of the old regime at Amoskeag was Jotham Gillis, followed by William G. Means, Joseph Knowlton, George W. Kimball and David Gillis.



1901

agent was given the right of first refusal in that capacity, and continued to do so up to and including Nov. 15, 1897, when the firm was authorized to make a contract for the sale of the goods of the Amoskeag Manufacturing Co. The contract with this firm was made on Dec. 1, 1899, and the Amoskeag Manufacturing Company assumed the full control of the company, and continued the direction of its treasurer, Mr. J. H. Prankard.

For many years before Mr. William S. Prankard, who for many years had been connected with the selling offices of the Amoskeag Manufacturing Company in New York city, have been in the employ of the agent, Walter L. Wellington, who had been in the employ of the Amoskeag Manufacturing Co. Mr. Wellington had been the New York agent of the company since Jan. 1, 1910.

The company will be designated as "Amoskeag Manufacturing Company, Prankard & Prankard, Agents," instead of Amoskeag Manufacturing Company, W. L. Wellington, Agent.

SUPERINTENDENTS

The position of superintendent did not apparently come into use until the organization of the Land and Water Power Department, when Mr. J. H. Prankard was chosen to that position February 20, 1891, and continued in that position until his resignation January 24, 1891. The position of superintendent was given the power to discharge men under the authority of the agent, he could appear before the board of directors.

PAYMASTERS

The first paymaster of the old regime at Amoskeag was John W. Gillis, followed by William G. Means, Joseph Knowlton, George W. Kimball and David Gillis.



ELLIOTT C. LAMBERT

The first paymaster of the New Mills was Charles Richardson, who was elected in November, 1841, and served until 1854, when he was succeeded by his nephew, Charles L. Richardson, who had been assistant or clerk for the former, and who discharged the important duties belonging to the responsible office until his resignation January 23, 1899, nearly forty-five years. Marshall P. Hall was assistant under Mr. Richardson for several years until his death in March, 1896, to be succeeded by John W. Rowley, who became paymaster upon the resignation of Mr. C. L. Richardson, and still holds the office, having for his assistant George A. Greenough.

OFFICIALS AT MANCHESTER, N. H.

Herman F. Straw, Agent.
William Parker Straw, Superintendent.
Perry H. Dow, Superintendent of Land and Water Power.
John W. Rowley, Paymaster.
William K. Robbins, Superintendent of Dyeing.
John C. Marshall, Superintendent of Worsted Manufacture.
Howard I. Russell, Superintendent of Carding.
Winthrop Parker, Superintendent of Spinning.
Forrester E. Jewett, Superintendent of Dressing.
C. Maurice Baker, Superintendent of Weaving.
Ralph S. Nelson, Superintendent of Cloth Finishing.
Alfred K. Hobbs, Claim Agent.
Alphonso H. Sanborn, Chief Draughtsman.
Frank L. Clarke, Chief Electrical Engineer.
Herman E. Thompson, Superintendent Mechanical Department.
Walter G. Dimen, Superintendent Steam Power Department.
George A. Greenough, Assistant Paymaster.
Arthur O. Roberts, Assistant Superintendent Worsted Manufacture.
Albert Merrill, Assistant Electrical Engineer.
Miles R. Moffatt, Assistant Superintendent of Dyeing.
Fred M. Caswell, in charge of Planning Department.
William C. Swallow, in charge of Employment Department.
Henry W. Allen, Civil Engineer.
Israel E. Boucher, Purchasing Agent.
John M. Kendall, Assistant Superintendent Power Department.

FOREMEN OF MECHANICAL DEPARTMENTS

Frank R. Vose, Despatching Department.
Myron L. Stickney, Repairs of Spinning, Weaving and Roving Machinery.
Charles H. Heseltun, Bolts, Nuts and Small Parts.
Chester E. Nealy, Sheet Metal and Plumbing Departments.
Sumner W. Patten, Baking Departments.
Jeremiah J. Dolan, Carding, Dyeing and Finishing Machinery.
William F. Twaddle, Wood Working Machinery.
Lafayette A. Hays, Millwright.
George C. Osgood, Heavy Machinery Repairs, Shafting, Etc.
Jared Irwin, Blacksmith Departments.
Cornelius A. Healy, Painting Department.
John H. Wales, Mason Department.
James Fairfield, Foundry Department.
Gustave F. Rydin, Roll Covering Department.
Charles B. French, Repair Shop, Northern Division.
August K. Eklund, In Charge Boiler Making Department.
Arthur P. Kimball, General Foreman of All Pipe Shops.

FOREMEN OF POWER DEPARTMENTS

Byron Worthen, In Charge of Water Wheels.
Benson Dyer, In Charge of Northern Division Power Station.
Robert Edgar, In Charge of Central Division Boiler House.
John Tobey, In Charge of Southern Division Boiler House.

FOREMEN OF ELECTRICAL DEPARTMENTS

Philip McCoy, Northern Division Electrical Department.
Patrick J. Leonard, Central Division Electrical Department.
James R. Edmonds, Southern Division Electrical Department.

FOREMEN OF YARD DEPARTMENTS

Charles M. Cross, Northern Division Yard.
Hanson R. Armstrong, Central Division Yard.
Robert Leggett, Southern Division Yard.

OVERSEERS NORTHERN DIVISION

Maurice J. Griffin, Jefferson Carding.
Thomas Gagnon, Jefferson Spinning.
James Lightbody, Jefferson Weaving.
Henry A. Berger, Jefferson Dressing.
George W. York, Bag Mill Carding.

Jos. T. Riley, Bag mill spinning.
John J. Wilcox, Bag mill weaving.
Hiram D. Turner, Amory carding.
Harry F. Hawkins, Amory spinning.
John M. Taylor, Amory dressing.
William Crocock, Amory upper weaving.
John A. Ryan, Amory lower weaving.
Herbert F. Alston, No. 1 and 2 Langdon carding.
William H. Sweetser, No. 1 and 2 Langdon spinning.
Fred Bond, No. 1 Langdon weaving.
Charles H. Whitten, Coolidge carding.
Philip Lemay, Coolidge spinning.
Charles E. Chapman, Coolidge north upper weaving.
James M. Yuill, No. 2 Langdon weaving.
Andrew Netsch, Coolidge north lower weaving.
Patrick O'Malley, Coolidge south upper weaving.
Charles E. Shaw, Coolidge south lower weaving.

OVERSEERS CENTRAL DIVISION.

Henry L. Battle, No. 1 carding.
Clarence A. Pierce, No. 1 spinning.
Henry R. Dickson, No. 3 carding.
Frank C. Kellogg, No. 3 spinning.
Richard W. Sanborn, No. 3 upper weaving.
Theophile G. Biron, No. 3 lower weaving.
Fred H. Rogers, No. 3 dressing.
Barton H. Avery, No. 4 carding.
George L. Pierce, No. 4 upper spinning.
Charles W. Richards, No. 4 lower spinning.
Arthur K. Gleason, No. 4 weaving.
Lyman H. Burbank, No. 7 dressing.
Peter M. Gunderman, No. 8 weaving.
Frank J. Hamel, No. 9 upper carding.
Charles A. Frost, No. 9 lower carding.
Herman D. Hazen, No. 9 lower carding, nights.
John J. Cronin, No. 9 spinning.
Arthur M. Ward, No. 9 weaving.
Albert Montgomery, No. 9 dressing.
Edgar A. Thayer, No. 11 upper weaving.
J. Adam Graf, No. 11 middle weaving.
Eugene B. Worthen, No. 11 lower weaving.
E. A. Morgan, No. 11 south lower weaving.
Henry F. Pillsbury, No. 11 dressing.

John H. Miller, No. 12 upper weaving.
William F. Alger, No. 12 lower weaving.
Homer E. Slack, Weaving, canal building.
Arthur E. Wiesner, Designing department.
Samuel Mungall, Fancy cotton dye house.
Andrew Spence, Blue cotton dye house.
Edwin C. Rogers, Harness room.
William Burlingame, Cotton waste house,
Robert McKinley, Captain night watch.

OVERSEERS SOUTHERN DIVISION

Edward S. Stratton, No. 1 carding.
Fred P. Foss, No. 1 spinning.
Clarence M. Woodbury, No. 1 dressing.
Herbert E. Richardson, Worsted carding, combing, preparing, etc.
John L. Mitchell, Worsted English drawing.
Amariah Avery, General overseer, worsted spinning.
Fred Bullard, No. 2 worsted spinning.
Leslie W. Harwood, No. 5 worsted spinning.
J. Dean Perkins, No. 2 worsted dressing.
Herbert A. Salls, Worsted weaving, No. 1 dept.
James M. Butler, Worsted weaving, No. 3 dept.
Emil Berglund, Worsted gray burling.
A. Wesley Eastman, No. 3 upper weaving.
Edwin A. Graf, No. 3 lower weaving.
Allen C. Dean, No. 10 south upper weaving.
John E. Hering, No. 10 middle weaving.
Elmer E. Hogle, Wool sorting department.
Robert Kiontke, Harness room.
Elmer E. Simpson, Gingham bleaching and washing.
James M. Richardson, Worsted dye house.
George A. Stokes, Supply department.
Ira T. Buck, Worsted waste house.
Ralph M. Page, Worsted twisting.
Fred W. McKewin, Wet finishing department,
David T. Hastings, Laboratory.
William B. McKay, Printing office.



COL. DEBUS

SUMMARY

AND

INDEX

CHRONOLOGICAL SUMMARY

EVENTS RELATING TO THE HISTORY OF THE AMOSKEAG MANUFACTURING COMPANY

1782. April 26, William Whipple and others granted to Robert McGregor the islands in the river, excepting Fishing Island, for 24 pounds lawful money. These became a part of the McGregor farm.
1792. Old Amoskeag bridge, near site of present McGregor bridge, built by Robert McGregor; became unsafe in 1848; was washed away in 1851; new bridge, called McGregor bridge, built in 1881.
1793. May 1, Judge Blodget began work on his canal; finished in December, 1806.
1804. Benjamin Prichard began work on the first cotton mill at Amoskeag. —
1805. Benjamin Prichard began manufacture in his mill at Amoskeag in the fall of this year. —
1807. May 1, Blodget's canal opened with interesting demonstrations.
1807. September 1, death of Hon. Samuel Blodget, the "Pioneer of Internal Progress in New Hampshire."
1810. January 31, Organization of manufacturing company, "Proprietors of the Amoskeag Cotton and Wool Manufactory." —
1810. June 5, the State Legislature granted an act of incorporation to the "Amoskeag Cotton and Woolen Manufacturing Company." —
1810. June 13, name of Derryfield changed to that of Manchester.
1811. May 22, Robert McGregor deeded his farm of 1100 acres to Robert Trask, this being the first deal in land relative to the Company's acquiring territory. The consideration was \$8,000. February 16, 1828,

1811. May 22, (*Continued*)

Israel Trask deeded the McGregor farm to Samuel Slater and his associates for \$18,000. This was the first purchase of land by the new combination of manufacturers.

1811. June 22, Preserved Robinson began the work of improving the machinery at the old mill.

1814. Merrimack Boating Company organized and through trips on the Merrimack first made.

1816-1842. Period of active boating on the Merrimack River.

1819. First power loom introduced at Amoskeag.

1822. Samuel Slater became interested in manufacture of cotton at Amoskeag.

1822. October 22, Olney Robinson purchased the manufacturing plant at Amoskeag.

1823. First cotton mill in Lowell started.

1823. Hooksett Manufacturing Company organized.

1824. November 6, Olney Robinson deeded the Old Amoskeag Mills to Larned Pitcher and his associates, together with five parcels of land.

1825. January 24, Messrs. Slater, Pitcher and Gay came into possession of one-half of the property at Amoskeag.

1825. December 17, the mill property at Amoskeag Falls passed into the possession of Messrs. Slater, Dean, Tiffany, Sayles, Pitcher and Gay.

1826. "Bell Mill" completed.

1827. "Island Mill" built.

1827-1830. Amoskeag became noted for the manufacture of A C A ticking.

1828. February 16, Israel Trask deeded to Samuel Slater and his associates the McGregor farm for \$18,000.

1831. July 1, incorporation of Amoskeag Manufacturing Company.

1831. July 6, the partners in the old company conveyed its property to the new corporation.

1831. July 6, warrant for first meeting of stockholders of Amoskeag Manufacturing Company issued by Dr. Oliver Dean, dated at Goffstown.



PANORAMA OF THE
FACILITY

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1823. Hosiery Manufacturing Company organized.

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PANORAMIC VIEW FROM WEST SIDE

Photo by A. H. Southern

-
- 1831. July 13, first meeting of the members of the newly incorporated company, Amoskeag Manufacturing Company, was held in the counting room of the Bell Mill.
 - 1831. July 14, first board of directors, consisting of three members, chosen. April 13, 1836, number was increased to nine.
 - 1833. June 28, President Jackson visited Bell Mill at Amoskeag, while on his tour of the state.
 - 1834. July 9, the first meeting was held in Boston and first dividend declared.
 - 1835. August 26, at the office of Sayles & Hitchcock, Boston, action was first taken towards improvements on the east bank of the river. The Company employed Caleb Eddy to draw a plan and map of the proposed undertaking of the Company. This became known as the "Eddy Plan." Six years later this map was slightly modified to suit the changes by John Stark, Jr.
 - 1835. September 2, directors voted to buy one thousand shares of Amoskeag Canal Company's stock at \$8 each.
 - 1835. October and December, the Amoskeag Company obtained complete control of the privileges at Amoskeag Falls, Isle of Hooksett, Canal Company and Bow Canal Company
 - 1836. Actual work begun in carrying out the plan of manufacture on the east bank of the Merrimack.
 - 1836. April 18, first meeting of the directors.
 - 1836. April 27, committee chosen to consider the question of building the Concord & Lowell Railroad and meeting called to see if stock would be taken to amount of \$150,000. On July 13, same year, the legislature granted the Company power to take such stock.
 - 1836. April 27, the Concord Manufacturing Company, owning one thousand acres of land and Garvin's Falls water privilege, was merged in the Amoskeag Manufacturing Company.
 - 1836. July 14, first entry in the records of the clerk of directors; second entry is dated July 12, 1735.
 - 1837. April 12, William Amory first elected to the office of Treasurer, which he held for 39 years.

1837. July 26, Amoskeag Company purchased the Amoskeag bridge, which stood where the McGregor bridge now spans the river, and made it free.
- 1837-1840. The old stone dam at the Falls was constructed under the supervision of David A. Bunton.
1838. January 1, Messrs. Sayles & Merriman, Boston, became the first sales agents of the Company.
1838. Early in the year the Company prepared a plan of a town, with streets, commons, sites for public buildings and building lots for sale traced by an engineer.
1838. Early in the summer the Company began to build a mill for the Stark Manufacturing Company, the first factory on the east bank of the river. This was completed in the spring of 1839, and work was almost immediately begun on a second mill. In 1844 an addition to these two mills was made so as to connect them, and united in one this structure became known as Stark Mill No. 1.
1838. July 25, Stockholders voted to convey Concord Manufacturing Company stock to Amoskeag Manufacturing Company.
1838. Less than fifty people lived in what is now the limits of the city.
1838. October 24; 1839, October 8; 1843, September 1; 1844, August 20; 1844, September 4; 1845, September 30; 1846, October 21; 1879, May 3; 1880, April 17; 1887, May 28; 1892, June 4, public sales of land took place, while private sales were made from time to time.
1838. November 9, the directors of the Company voted to build of brick the tavern soon widely known as the Manchester House.
1838. At the annual session of the state legislature the Stark Manufacturing Company was incorporated. First meeting of the members of the new organization met on September 26, to choose a board of officers.
1838. At the meeting of the directors, November 9, it was voted "to plant trees on Elm street and other streets as thought expedient."
1839. October 8, the board of directors was given absolute power in the management of the Company.

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1839. Manchester Mills chartered, capital stock, \$1,000,000.
1840. March 14, the Island Mill destroyed by fire.
1840. Mr. William Shepherd opened the Manchester House, for some time known as "Shepherd's Tavern."
1840. First Irish operative in Manchester began work in the Stark Mill No 1. French came near the close of the Civil War and the Germans in the early 70's.
1840. The Company erected its first machine shop.
1841. January 9, the lot consisting of ten thousand square feet was voted as the site of the present city hall, for a town house. Accepted by the town February 1, 1841, and house built that summer.
1841. January 29, provisions were made for the laying out of Canal street.
1841. Begun in 1840, Mill No. 1 of the Amoskeag Manufacturing Company was completed and fitted with machinery, and on November 17, the event was celebrated by an elaborate banquet at Shepherd's Tavern. Mill No. 2 was built within a year.
1841. November 29, Messrs. Lyman, Howe and Amory were chosen a committee to contract for the sales of the Company's goods.
1841. November 29, Charles Richardson, elected first paymaster of the new mills.
1842. January 24, the Company originated first banking system in town.
1842. First bridge at Amoskeag Falls built at a cost of \$12,069; carried away by freshet in 1852; rebuilt in 1854, and still doing service, one of the oldest covered bridges in the state, and among the very few left.
1844. August 12, first town house destroyed by fire.
1844. The grantees of the Manchester Mills began active operations. First mill completed in 1846; title changed to Merrimack Mills in 1847; to Manchester Print Works in July, 1849.
- 1844-1850. Mill No. 3, in two sections, was built. Rebuilt in 1870.
1845. October, a new town house, the one now standing with some alterations, was completed.

1846. January 28, one thousand dollars was given to the Athenaeum with which to purchase books on Mechanic Arts and Sciences.
1846. Manufacture of delaine goods transferred from Hooksett Mills to Manchester Mills.
1846. The Amoskeag Company built Stark Mill No 2.
1847. January 12, lot of land for the site of the old courthouse was given the city.
1848. January 25, deeds were given the city for the land comprising Merrimack, Concord and Tremont squares.
1848. New machine shop built. Work in this building was discontinued in 1883.
1848. Mill No. 4 was built. Extension made 1872.
1848. March 30, Old and Bell mills burned. Heated by stoves; fire caught from pipes. Estimated loss, \$50,000; partly insured. Counting room at this time was in a separate building and not injured. See *Manchester American*, March 31, 1848.
1849. In July, Manchester Print works became the fixed title of the company organized to manufacture delaines, etc.
- 1849 to 1859. 232 locomotives were built by the Company, and from the latter date to 1877, 550 steam fire engines were built, supplying not only some of the large cities of America, but those of the maritime provinces, England, Russia, Japan, China, New South Wales, South America, and many other places. From 1863 to 1866, 500 McKay sewing machines were made.
1850. March 16, fire broke out in Stark Mill No. 1, doing considerable damage.
1850. Building was begun on "Mechanics' Row," known for a time as "Mechanic's Mills."
1851. In January illuminating gas was installed.
1851. The Company was awarded its first medal for superiority of goods at the World's Fair held in London.
- 1851-1853. Amoskeag Reservoir constructed with a capacity of 11,000,000 gallons.
1852. September 22, fire in the Manchester Print Works. Loss about \$125,000.00. July 15, 1855, a second fire did greater damage.

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1852. October 23, Hanover square donated to the city.
1853. Mills Nos. 7 and 8 were built.
1853. Original No. 9 mill built; reconstructed in 1880; a top story added in 1903.
1853. In June Amoskeag made a part of Manchester.
1853. Blodget Paper Company incorporated. Sold at auction in 1870.
1854. Blodget Paper Company manufactured the first paper hangings in this country.
1854. May 31, Company asked permission of the state legislature to discontinue Isle of Hooksett, Blodget and other canals between Nashua and Concord. Request was granted.
1854. July 25, Charles L. Richardson chosen paymaster, holding the office until his resignation, January 23, 1899.
1855. March 20, operatives in Manchester Mills refused to work on account of a new schedule which added half an hour's time to their daily work. The matter settled inside of two weeks.
1855. In June, the state legislature granted the Company permission to discontinue the locks.
1855. July 15, fire occurred in Manchester Mill No. 1, causing a damage of \$240,000. At the same time a fire burned the buildings between Manchester and Hanover streets.
1855. Mill No. 5 was built. See page 103.
1856. Amoskeag Duck and Bag mill organized; 1866, re-organized and name changed to Namaske mill; 1875, bought by Amoskeag Manufacturing Company.
1856. Litigation was begun over damage by flowage, followed by a series of suits, the last taking place in March, 1901.
1856. July 28, Ezekiel A. Straw chosen agent.
1857. October 1, voted to change time of holding annual meetings from July to October.
1857. Merrimack Water Power Company incorporated, with the purpose of securing the property of the Amoskeag Manufacturing Company, but nothing came of the organization, which started off with very ambitious aims.

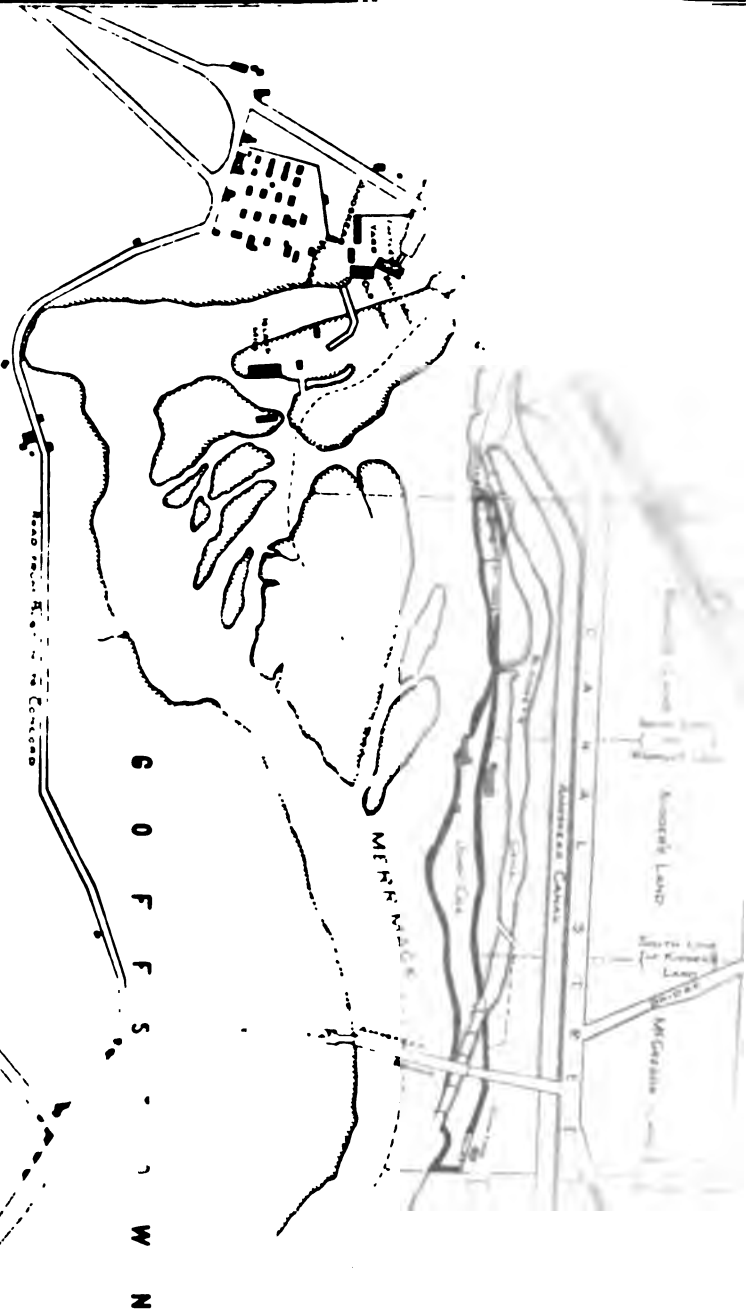
1858. July 28, at the annual meeting, the departments of Land and Water Power and Machine shops were placed under one government.
1859. October 4, Gardner Brewer & Co., became selling agents, and served in that capacity until 1874, to be succeeded November 30 by the Gardner Brewer Company.
1859. The Company began to manufacture steam fire engines, closing out this manufacture in 1876, by selling to the Locomotive Works which had previously acquired the business of building locomotives.
1860. Langdon Mills incorporated.
1861. July 4, workmen of the machine shops unfurled a flag in honor of the "Boys in Blue." This was probably the first flag raised by the mills.
1862. The Company built the first machinery for its own use. (See page 83 for record of different years.)
1863. Manchester bleachery incorporated and incorporation renewed in 1866.
- 1863 to 1866. Manufacture of between five and six hundred McKay sewing machines by the Company; 25,000 Springfield rifled muskets and 6,000 carbines for the Government.
1865. The Amoskeag Manufacturing Company sold the Hooksett mills to a new company.
1865. July 15, second fire in Manchester Print Works occurred, damaging the largest mill to the extent of \$271,353.00.
1869. January 30, lot for the city library on Franklin street was voted the city.
1869. Mill No. 7 built.
1871. The new dam was built under the direction of Ezekiel A. Straw.
1871. October 4, Dr. Oliver Dean, after 40 years of service, and George W. Lyman, following 35 years of affiliation with the Company, retired from active duties.
1874. The Langdon mills sold at auction to the Gardner Brewer Company. This concern, which had been mainly financed by the Blodget Paper Company, was soon after re-established by the Amoskeag Company under the firm name of the Langdon mills to be

1874. The Langdon Mills (*Continued*)

- eventually absorbed by the Amory Manufacturing Company, as that in turn was taken over by the Amoskeag Company.
1874. March 24, the Print Works sold at auction, and name changed to Manchester Print Works and Mills. The same year title was changed to Manchester Mills.
1874. Mill No. 8 built.
1875. The Company bought the Namaske Mill. In 1888 it was sold to A. P. Olsendam for a hosiery. May 19, 1905, this property again became the purchase of the Amoskeag Company.
1879. May 22, J. L. Bremer & Co., became selling agents.
1880. Mill No. 9 was built.
1880. Amoskeag Company sold land to the Amory Manufacturing Company.
1880. To this year the mills depended entirely on water power to run the machinery.
1880. First Amoskeag Segment, built under direction of James D. Butler, was constructed.
1883. In July, Park street common was deeded to the city on the condition it be enclosed by a stone curbing.
1886. February 15, Gingham weavers in Mill Nos. 7, 8, 9, to the number one hundred, quit work on account of dissatisfaction in regard to the new schedule of prices. Differences adjusted and operatives return to work March 5.
1886. Mill No. 10, or Jefferson Mill, was built on the site of Mechanic's Row. Steam power installed.
1889. Mill No. 11 was built.
1889. October 8, visit to the mills of the Pan American Conference.
1891. October 15, the bursting of the fly wheel of a pair of Corliss engines killed Samuel J. Bunker, Mrs. Ada L. Cram and Miss Mary Kane.
1892. May 19, the Amoskeag Company sold the water rights at Garvin's Falls which they acquired in 1836, to the Garvin's Falls Power Company, William A. Russell, Boston, trustee.

1893. June 2, the payroll was made up from deposits in the Amoskeag National Bank of Manchester. Previous to this the money had been shipped from Boston fortnightly.
1894. The printing plant was put into active condition in No. 11 cloth room. Fourteen years later this plant was moved into more commodious quarters in the old engraving building of the Company.
1895. April 12, began one of the worse freshets then known in the history of the Merrimack, only to be outdone by the great freshet beginning February 28, 1896.
1896. March 1, Granite street bridge destroyed by the freshet.
1896. Electrical power began to gain in extent of its use.
1899. January 23, John W. Rowley, the present incumbent, became Paymaster.
1899. Mills Nos. 4, 5 replaced by new structure.
1899. November 20, the Manchester Traction, Light and Power Company secured the rights and water privileges at Garvin's Falls.
1901. Last suit for damgae done by flowage of land settled in March.
1902. September 13, Lafayette Park donated the city.
1905. March 15, the Amoskeag Company purchased the Olzendam hosiery, and the old name of Namaske mill was restored.
1905. December 12, Amoskeag Company stockholders voted to purchase the Amory mills and the Manchester mills.
1905. December 12, it was voted to change the par value of Amoskeag Company stock from one thousand to one hundred dollars each.
1906. January 15, term of clerk changed to secretary of board of directors.
1908. July 31, the Company bought 8 acres of land in Merrimack of the Spaulding, Jones Power Company, and a tract in Litchfield of the same party.
1908. August 9, the Company leased the city a tract of land 114,000 square feet in area for public use as Parker common.

Suena



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- 1908. The printing office was installed in the old engraving building.
 - 1909. Northern division power station was built.
 - 1909. The Coolidge mill was built.
 - 1909. December 22, under the direction of the Company, the treasurer, Mr. F. C. Dumaine, became the agent to dispose of the goods.
 - 1910. Saturday, August 13, plans for the formation of the Amoskeag Textile Club made while its founders were enjoying an excursion to Hampton beach.
 - 1910. The women clerks formed an association under the name of Amoskeag Lady Clerk's club, the first banquet being held at Riverside Inn, October 31. January 6, 1913, the club was reorganized and named the Amoskeag Woman's Textile club.
 - 1911. In the summer the Company established an employment department, with offices in the new brick building on Canal street.
 - 1911. At the same time and in the same building as above, the Accident department was inaugurated.
 - 1911. Children's playground on the site of the railroad depot was laid out and fitted up.
 - 1911. August 22, directors voted to transform the corporation into a voluntary association, which vote was ratified by the stockholders, September 29, 1911.
 - 1911. In October the Amoskeag Manufacturing Company was transformed from an incorporated body into a voluntary association.
 - 1911. Rimmon Park given the city.
 - 1912. March 18, the Company instituted the system of selling lots of land upon easy terms of payment for employees of five years service.
 - 1912. December 2, first number of Amoskeag Bulletin issued.
 - 1912. In December secured control of Varick Park.
 - 1913. January 6, the Amoskeag Woman's Textile club organized, being a reorganization of the Lady Clerk's club.
 - 1913. September 8, Textile Field dedicated.
 - 1914. January 1, the 55-hour law went into effect.

1915. In March work was begun in the construction of a new bag mill in Northern division, 130 feet 4 inches in width; 500 feet six inches in length, three stories in height. Foundation for building laid in fall of 1914.

CHRONOLOGICAL SUMMARY

OF FACTS RELATING TO COTTON MANUFACTURE

- 1700-1705. England imported 1,171,000 pounds of cotton. Before the 18th century. England imported her cotton from Cypress and Smyrna.
1718. "The spinning crase," followed the arrival of the Scottish immigrants to New England.
1730. Mr. Wyatt spun the first cotton.
1733. November 25, Philip Mather of Chelsea, Eng., sent a paper of cotton seed to a settlement in Georgia, which reached there in March, 1734.
1735. The Dutch colony of Surinan, South America, sent first cotton to Holland.
1738. June 24, first patent for spinning by machinery taken out in the name of Lewis Paul.
1741. The raw cotton was imported into England to the amount of 1,900,000 pounds.
1742. Cotton was first spun at Birmingham by mules or horses.
1748. August 30, patent granted to Lewis Paul for a carding machine.
1760. The value of cotton goods manufactured in England was £200,000. 1760 to 1820 the value of cotton manufacturing in England increased from £200,000 to £34,000,000.
1761. Arkwright granted his first patent.
1767. Spinning jenny invented by Hargreaves.
1769. Richard Arkwright received a patent for his carding frame.
1774. Royal assent was given to manufacturers not to allow cotton manufacturing machinery to be exported from England.

- 1780. Sea Island cotton introduced and staple cotton first cultivated in the South.
- 1781. Ireland began to send cotton to England, and manufactured goods to the value of £157, and 17,328 pairs of cotton stockings.
- 1785. England got first cotton from Brazil. This was the same year Watts steam engines were introduced.
- 1787. First cotton spinning machinery set up in France.
- 1787. First cotton factory in the United States, built at Beverly, Mass.
- 1788. Some spinning jennies put in operation in Philadelphia and Providence.
- 1789. Samuel Slater came to this country and was employed in New York.
- 1790. Samuel Slater erected the first cotton mill at Pawtucket, R. I.
- 1791. Began spinning at Providence.
- 1792. Eli Whitney invented the cotton gin.
- 1793. In April, Eli Whitney perfected his cotton gin.
- 1794. March 14, Whitney received a patent on his cotton gin.
- 1798. United States exported 9,300,000 lbs. of cotton. Prices in England, 22 to 25 d. in America, 39 cents.
- 1798. Cotton mills were first introduced into Switzerland.
- 1799. First cotton mill in Saxony.
- 1803. First cotton factory in New Hampshire begun at New Ipswich.
- 1804. First cotton factory set in operation in the state at New Ipswich.
- 1805. First power loom introduced into the United States at Waltham, Mass.
- 1807. Second cotton mill at New Ipswich built and set in operation the following year.
- 1809. First cotton mill in Maine at Brunswick.
- 1814. Power looms set in operation in this country at Waltham, Mass.
- 1822. First cotton factory built at Lowell, Mass.
- 1823. Egypt sent cotton to England.
- 1826. Roberts, Eng., invented self-acting mule spinner.
- 1849. First cotton mill at Lawrence, Mass.

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